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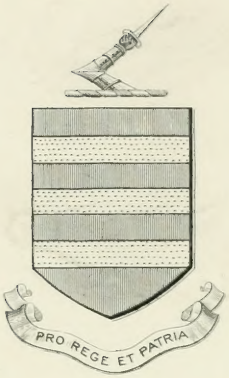

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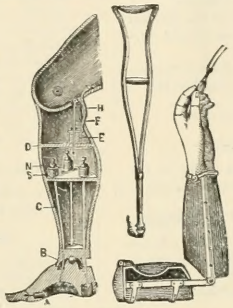

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THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIV. SATURDAY, JANUARY 5, 1884. NO. 1.

ORIGINAL LECTURES.

HEAD-INJURIES ACCOMPANIED BY PARALYSIS.

A Clinical Lecture, delivered at Bellevue Hospital.

BY FREDERIC S. DENNIS, M.D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF SURGERY IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK CITY.

GENTLEMEN: The first case which I shall introduce to you this afternoon is that of a child, whom you saw in the clinic last Saturday suffering from complete hemiplegia. If you refer to your notes, you will find that this little boy, three months since, sustained a compound fracture of the skull, by falling from a great height, and that after the depressed bone was elevated the child recovered. During the past few weeks he has not been feeling well, suffering from slight headache, elevation of temperature, and acceleration of pulse. He has lost his accustomed appetite, has become exceedingly irritable, and does not sleep well. The wound upon the head appears unhealthy, and discharges a small quantity of sanious pus. These symptoms have gradually become exaggerated, and have finally resulted in complete hemiplegia, in which condition you saw the child at my last clinic. The history of the case, I then told you, pointed to an intracranial abscess beneath the site of the original wound. That diagnosis was correct, for considerable pus was discharged through the opening made last week. Last Saturday this little fellow was completely paralyzed upon the side opposite to his head-injury. The child has gradually improved daily, and, as you see, can move the leg and the arm, and now the nurse will let him down from her arms, and you observe that he is able to walk out of the clinic, and also to raise his arm sufficiently to seize the hand of the nurse.

This, then, is a typical case of paralysis which was caused by pressure of pus upon the brain, and I will avail myself of this case to base a few remarks upon the question of "Trephining for the Relief of Paralysis in Head-injuries."

You know that in my didactic lectures I told you that compression of the brain with paralysis was due to some kind of pressure, of which *bone*, *pus*, *blood*, *foreign body*, were the chief causes, and you remember that each cause was considered at length with the diagnostic symptoms. In the clinic to-day I will show you cases illustrating these four causes of paralysis, in order forcibly to impress upon your minds the lessons which were then inculcated. I further remarked, in connection with this subject, that at times it was very difficult to establish a correct diagnosis, even with good data to aid and with symptoms well pronounced. Since lecturing to you upon that subject, I have met with a case illustrating in a striking manner the uncertainty and difficulty of making a diagnosis, and I will refer to the patient in the way of a short digression, as the case seems especially pertinent.

A man was struck upon the side of the head two weeks before admission into the Ninety-ninth Street Reception Hospital, and although he was unconscious a few minutes after the blow, he soon regained consciousness and was apparently well for over a week, when he had symptoms very similar to those described in the case of the little boy, who, a week ago, was paralyzed, but to-day has just walked out of the clinic. When the ambulance brought the man to the hospital, he was in coma, and had complete hemiplegia upon the side of the body opposite to the head-injury, the evidences of which were manifest locally, and the fact of the injury was corroborated by the testimony of his friends. The question of abscess of the brain as a result of the head-injury suggested itself to me, considering the hemiplegia and coma following two weeks after a severe blow with a club upon the head. The operation of trephining was indicated, but before deciding upon this step I had the temperature taken and the urine examined. There was slight elevation of temperature, but not sufficient to indicate formation of pus. The urine was heavily loaded with albumen and contained casts. I deferred the operation for these two reasons, and the autopsy upon the following day revealed the wisdom of the course of non-interference, for the case proved to be one of ordinary apoplexy, or hemorrhage into the corpus striatum, occurring incidentally with a severe blow upon the head, which injury perhaps may have acted as an exciting cause to develop the apoplexy.

Thus you see, Gentlemen, that while the history of the case would naturally suggest compression from pressure due to pus as the cause of the hemiplegia, and indicate the use of the trephine, the absence of sufficient elevation of temperature, and the presence of a considerable amount of albumen and casts pointed to another probable cause for the hemiplegia. The case of the little boy and that of the man, from a clinical point of view, are of great interest, as illustrating the principle and impressing the lesson of examining carefully and thoroughly into every case, and of using every means at hand in order to establish a correct diagnosis before attempting any surgical operation upon the head.

These two cases further present for your consideration two of the four causes of paralysis, namely, *pus* and *blood*, and although no operation was indicated to relieve the paralysis in the case where the blood was the cause of the hemiplegia, yet you are not to understand that an operation is not indicated where there is a surface clot in head-injury, and this leads us to the fact that blood may cause paralysis in one case and no operation can be performed, while in another case an operation may relieve the hemiplegia, and the cause still be from pressure of blood.

I will present to you, next, a case in which *bone* was the cause of the paralysis, and which will further afford a most beautiful example of cerebral localization. This patient, whom you all now see, and whom some of you saw when he was trephined, has the following history: He was working in a cellar when a paving-stone fell

upon him from a height of twenty feet, striking him on the head. He was seen by the ambulance surgeon, Dr. Keene, of St. Vincent's Hospital, a few minutes after the injury, when he was found to be quite conscious, but for a minute exhibited clonic convulsions of the left arm. These movements were not afterwards repeated, but were succeeded by chilly sensations. His pulse was regular and about seventy to the minute, his respirations were rapid, and his pupils were normal. There was a contused, lacerated wound over the right side of the head, at about the junction of the parietal with the temporal regions. From this wound there was profuse hemorrhage, and at the bottom of the wound the bone was felt to be markedly depressed. When admitted to the hospital the right pupil was wider than the left, and sluggish in its action; the pulse was slower, about sixty to the minute, and bounding; the respirations were deep and noisy, the extremities were cold, and the patient perfectly conscious. There was partial paralysis of the left arm; he could not flex or extend the elbow, but could, with difficulty, partially abduct the limb from the side. He complained of severe pain in the muscles of the neck, especially on the left side. He was placed immediately under ether and the wound in the scalp was enlarged, which exposed a stellate depressed fracture; the fragments were raised into position, after removing a small portion of bone with the Hey's saw, and sixteen pieces were taken out of the skull from the bottom of the wound. The exposed dura mater was uninjured, and the brain was seen pulsating beneath it. The wound was cleansed and dressed with carbolic lotion, one to forty, and in a short time healed by granulation, with a firm cicatrix. The paralysis at once subsided after the operation, and his temperature, pulse, and respiration remained about normal during convalescence.

This patient is one of the most interesting cases to illustrate paralysis from pressure of bone. The case is highly instructive for this purpose; but when you study it more closely you see at once a rich field of inquiry open to you. It is a case illustrating recent views concerning cerebral localization, and on account of the rarity of these cases and the accuracy of the diagnosis, you will at once perceive that it is one of the few cases recorded of cerebral localization from pressure by bone. Some valuable contributions of this nature are found in Nothnagel's well-known work, *Topische Diagnostik der Gehirnkrankheiten*, Berlin, 1879; also by Ferrier, and the writings of Charcot and Pitres in various French journals. In the *Revue de Médecine* Charcot and Pitres are now publishing a series of most interesting articles. Experiments on animals are much less conclusive as regards the localization of functions in the human brain than are well-observed pathological cases in man. It is established by the researches of Charcot and others, that the motor part of the cerebral cortex in man embraces the central convolutions, the paracentral lobules, and a part of the adjacent convolutions. According to Charcot and Pitres, there are motor centres for the opposite side of the face in the lower part of the central convolutions, particularly of the anterior central; motor centres of the arm in the middle third of the anterior central convolution; and centres for the opposite upper and lower extremities in the paracentral lobule and upper parts of the central convolutions. The separate centres for the opposite lower extremities appear, according to Charcot, to be in the paracentral lobule; but they have not been so accurately determined as those of the upper extremity, because cortical paralysis confined to the lower extremity is very rare. Cortical paralyses may be in the form of total hemiplegia, of associated monoplegias (as paralysis of one arm and of one side of the face), or of pure monoplegias (as paralysis of the arm alone).

The most common example of a pure monoplegia due to cortical lesion is brachial monoplegia, or paralysis of one arm. In brachial monoplegia of cortical origin, the lesion is situated in the middle third of the anterior central convolution. Now, Gentlemen, this case before us, on the table to-day, was one of pure brachial monoplegia. The lesion therefore would be of the middle third of the anterior central convolution. There was no paralysis except that of the left arm. This case before us is one of great value, as showing the importance to a surgeon of the knowledge of recent studies in cerebral localization—also for the clear and precise nature of the symptoms and their strict localization. The ataxia which existed for a short time after the paralysis disappeared was interesting, and was probably due to a temporary disturbance in the nutrition of the motor centres. Upon this brain, which is hardened in nitric acid, you see the exact point of pressure which caused the brachial monoplegia in the brain of the patient, who is here in the clinic to-day.

The fourth and last cause of paralysis from head-injury is due to the presence of a *foreign body*, as a bullet, piece of iron, or any other hard substance which has been driven into the brain. I now show you several such bodies which others and myself have removed, and which foreign bodies have been the cause of paralysis.

This completes the four causes of paralysis from head-injury, but before dismissing this most interesting subject I must avail myself of another case, which I now introduce to you, and which was one of paralysis with no injury of the brain, but an injury to the spinal cord.

This man was brought to the Ninty-ninth Street Reception Hospital by the ambulance on account of an injury sustained by a heavy bank of earth caving in and falling upon his back. He suffered from paralysis of his left leg, and from anæsthesia of his right leg, both of which symptoms occurred shortly, although not immediately, after the accident. His bladder was also paralyzed. I made the diagnosis of spinal hemorrhage, and the history of the case has confirmed the diagnosis. This case illustrates a very interesting and rare form of paralysis, due to an affection involving the spinal cord. This form of paralysis is called spinal hemiplegia, or spinal hemiparaplegia, according as the arm and leg are both affected, or the leg alone is involved. We owe to Brown-Séquard most of our knowledge upon this subject. His conclusions are based upon experiments upon animals, and afford an admirable example of the importance of such experiments. Brown-Séquard has proved that if one lateral half of the spinal cord be cut across in the dorsal or in the lumbar region, there results paralysis of motion in the lower extremity on the same side as the lesion, with loss of sensation, or anæsthesia of the opposite lower extremity. This condition is called hemiparaplegia. If the lesion affected the lateral half of the cord in the cervical region, then the arm and the leg on the side of the lesion are paralyzed, and the condition is called spinal hemiplegia. In the

extremity with paralyzed motion, sensation is intact, or may be even exaggerated (hyperæsthesia).

In the patient before us we found incomplete paralysis or paresis of the left leg, which, however, retained its sensibility, and, in fact, for a few days seemed to be hyperæsthetic. In the opposite leg motion was perfectly normal, but there was marked loss of sensation, although not complete anæsthesia. The loss of sensation was made evident by pricking the skin, and by the use of the æsthesiometer. The case therefore belongs to the class of spinal hemiparaplegias described by Brown-Séquard. These symptoms developed soon after his injury, which was caused, as I have already mentioned, by a bank of earth falling upon his back. We cannot be positive as to the nature of the lesion, but it seems probable that a small hemorrhage occurred in the spinal meninges, and caused pressure upon one lateral half of the cord. This was the diagnosis I made at the time of the accident, and the rapidity of his recovery, as well as the manner of his recovery, would indicate this as the probable lesion, the symptoms disappearing as the blood was removed by absorption. Such cases are extremely rare. They illustrate the important physiological fact that the motor fibres do not cross to any considerable extent in the spinal cord, while the sensory fibres cross throughout the whole course of the cord.

This unique combination of cases, all occurring about the same time, has enabled me to bring before you in a striking and forcible manner the question of trephining in head-injuries associated with paralysis, and also the question of paralysis in injuries of the spinal cord. Spinal hemiparaplegia, from its infrequency, and the group of cases illustrating all the causes of paralysis in head-injuries, form a most important theme for study and reflection, and if they only prove to illustrate the great principles which have been insisted upon in the didactic lectures, of which the clinic to-day is an attempt to impress by illustration, I shall be content with the hour's work; and in concluding this part of the subject let me add that much is yet to be learned in this important domain of surgery, and I trust that the exhibition of these cases will increase your zeal in the study of paralysis arising from surgical causes.

Before dismissing this important surgical topic, there is still one other principle I would like to illustrate. You remember that in my didactic lectures I told you that in compound fractures of the skull, where the trephine is indicated, the prognosis depends not so much upon the extent of the fracture of the bone, as upon the question of the amount of injury done to the contents of the skull. The same surgical axiom holds good in cases of fracture of the pelvis; it is not the fracture of the bone so much as the injury to the pelvic organs which influences the prognosis. To recur to our first proposition, and to strengthen it by several living illustrations, I introduce first to you the patient whom some of you saw operated upon at the Ninety-ninth Street Hospital. This patient, who has kindly consented to come to my clinic to-day, is a man who sustained a compound comminuted fracture of the frontal bone, produced by the kick of a vicious horse. It is sufficient to say that sixty-four pieces of bone were removed from a wound which embraced nearly the entire forehead. Many of these pieces were large, and the extent of the comminution made it necessary for the house-surgeon, Dr. Fergusson, to take away most of the frontal bone. The contents of the brain appeared uninjured, and the man to-day is perfectly well, and is engaged at his usual avocation. The second case is one whom you now see, and from whom thirty pieces of bone have been removed, owing to a compound comminuted fracture of the skull produced by direct violence. In this man's case the contents of the skull were not injured, and this fact made the prognosis good, whereas, otherwise, it would have been most serious.

The third case, which I now show you, is one in which I trephined for persistent headache of six years' duration, and after removing a circular plate of bone over the seat of an old depressed fracture, the symptoms entirely disappeared, and the patient has been entirely free from the severe pain, the cause of which was revealed by the operation to be pachymeningitis externa. There was no injury to the brain itself, and the operation consequently was attended with no danger. These cases, together with others which I have operated upon from time to time, only strengthen the truth of the statement, that, with the dura mater uninjured, and the brain itself undisturbed, the prognosis is always good. In conclusion, it is surprising to learn how many eminent surgeons have been, and are even now, opposed to the use of the trephine. Notwithstanding the favorable results from trephining which you have seen from time to time in this clinic, yet there are surgeons who still decry the operation. In Mr. Gamgee's recent work on the treatment of fractures, one of the most valuable contributions made to the surgery of this subject, and a book which I am sure you will study with great profit and pleasure, you will find a most interesting chapter upon this very question of trephining. He shows that there is still a very wide diversity of opinion among eminent surgeons upon this point, and that while during the last century the trephine was used extensively, Desault, a French surgeon, was the first to oppose its use. Percival Pott, an English surgeon, on the other hand, urged its indiscriminate use. John Hunter, Pott's most illustrious pupil, advocated its use, and there were then two distinct classes—on the one side Desault, John Bell, Astley Cooper, Abernethy, Liston, and others argued against its use; on the other side Pott, Hunter, Guthrie, Brodie, Velpeau, and others argued in its favor. This great controversy influenced in different countries the number of the operations. Thus, during ten years from 1855, there were reported only four cases of trephining in France, while in England during the same period there were reported, according to Le Fort's analysis, one hundred and fifty-seven cases. The late Mr. Callender stated that the trephine had not been used for six years in St. Bartholomew's Hospital, though Mr. Callender was the successor of Percival Pott, through such a lineage as Abernethy, Lawrence, and Paget. This change in the very hospital which was formerly the arena where the trephine was so frequently resorted to, is as strange as it is significant.

When we consider how frequently trephining was performed in very early times, and with success, assuredly in these days surgeons should not hesitate to perform an operation which holds out such good prospect of recovery. During the Stone Age, Prof. Broca has informed us that trephining was practised by the ancients with only pieces of flint, and with these rude instruments they scraped the bone until a disk was removed sufficient

to expose the dura mater. Mr. Blaker, of London, in a very valuable historical contribution says, "considering the class of cases, the desperate nature of the operation, and the barbarous method of performing it, to say nothing of the after-consequences, *e. g.*, hemorrhage, blood-poisoning, erysipelas, the danger of injury to the brain, the want of proper nursing, and bad hygienic surroundings generally, it is wonderful that any one patient recovered; and yet, incredible though it seems to be, Dr. Prunères states that out of twenty skulls in his possession (all of which were trephined during life) nineteen of them exhibit indubitable signs of having recovered from the operation." He further states that these disks of bone were worn as amulets and considered as talismans to ward off disease. Where the patient died, the amulet was attached to the body as a sort of talisman to ward off evil spirits in another world. Prof. Broca adds that this is one of the earliest indications we have recorded in history "of the belief in a life beyond the grave."

Thus you observe, Gentlemen, that the operation which you have witnessed in the clinic is of very great antiquity, and with the resources of modern surgery the operation should be free from danger.

With the great diversity of opinion upon the question of trephining, I am not surprised that many of you are in doubt as to which course to pursue. My advice to you in this matter, as in many other difficult questions in surgery, is to be guided not by history, nor by tradition, nor by single authority, for often these guides mislead and misdirect. History, and tradition, and authority may not be trustworthy guides for you in these great emergencies. Let your actions be governed by the individual circumstances which arise in connection with each particular case. Consider every case by itself, and where the indications which I have already given you are present, trephine; but where they are absent adopt the plan of non-interference. The subject of the manner in which the operation is to be performed will be considered in our demonstrative course upon the cadaver; and now, Gentlemen, I will say no more to-day upon the question of trephining, but leave this subject for you to reflect upon and carefully to study over, in the hope that the few hints which I have given you may awaken a new interest in a surgical theme as trite as it is important, and as difficult as it is fascinating.

ORIGINAL ARTICLES.

ON DIGITAL EXPLORATION OF THE BLADDER IN OBSCURE VESICAL DISEASE;

WITH ITS RESULT IN THIRTY-TWO CASES.

BY SIR HENRY THOMPSON,

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No one who has had much experience in the treatment of maladies affecting the urinary organs will deny that he occasionally meets with a case, the nature of which, however closely it is studied, is not determined by the ordinary methods of investigation. Nevertheless, it must be conceded that our diagnostic means and appliances are numerous and efficient; and, furthermore, that a large portion of the urinary apparatus may be reached without difficulty and be examined in various ways.

These methods comprise palpation and percussion externally, the use of the sound and catheter internally, and an examination of the characteristic secretion, the urine, physically, chemically, and microscopically.

Extensive as these resources are, a certain proportion of patients, larger perhaps than is generally supposed, receive treatment for long periods of time, such as months or even years, without any satisfactory diagnosis having been made of their cases. Of course, when they are described or referred to, recognized forms of technical phraseology are employed, affecting to indicate, if not clearly to express, the pathological significance of their symptoms. Thus they may be attributed to some affection of the kidneys or to "chronic pyelitis," or to "chronic inflammation and congestion of the bladder," while the specific character of them is sometimes said to be "gouty," an epithet which, manifestly appropriate in some instances, is as manifestly suggestive of uncertain diagnosis in others.

Thirty years of practice have made these facts but too obvious to myself, and for a large part of that term I have diligently labored to cultivate in the classroom and elsewhere a high appreciation of the art of diagnosis, in regard of which I may perhaps be allowed to refer to my clinical lectures, oral and published. But some five or six years ago, I came to the conclusion that, keen and careful as we might be, the cases of urinary disease which defy analysis are so numerous and so important as to demand a further method of investigation than they had hitherto received; and I resolved to make a bold experiment for the purpose of accomplishing it. I determined on searching the bladder, if possible, with the finger itself, when the sound and other means enumerated had failed to inform me, and when the symptoms were so grave as to demand a knowledge of their source, and probably some efficient surgical action, in order to give a chance of life to the patient.

The first question naturally arising was, will it be possible to accomplish this completely in many, or indeed in a moderate proportion, of these obscure cases? There proved to be no difficulty in the dead body: and, with anæsthesia, I thought there ought to be none in the living. And having well considered both the suprapubic and the perineal routes, I adopted the latter, introducing my finger as far as to the internal meatus, by means of a limited perineal urethrotomy, without section of the prostatic urethra, finding that this afforded me an unexpected facility in obtaining that intimate knowledge of the interior of the bladder which I sought.

The operation which I have now so often practised, is simply what I have called it, external or perineal urethrotomy; the well-known incisions, but less extensive, which have long been employed for the division of stricture, etc. An operation practised by our own Richard Wiseman, in the

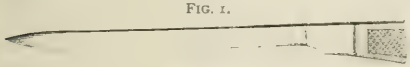
seventeenth century, described also nearly at the same period by François Tolet, and subsequently by Colot, Petit, Ledran, and several others, as the Boutonnière, by which name it has long been familiarly recognized in France.

But my proceeding, almost identical in regard of incision with this (for anatomical conditions being unchanged, new routes to the bladder are not now discoverable), has a new object, and has been proved competent to discover and to treat conditions never so discovered and treated before. It is the object and the achievement of the proceeding which are new, and not the incisions by which they are attained. Further, even the incision would not alone accomplish what is necessary, and could not do so until the discovery of anæsthetic agents enabled us to induce *complete relaxation of the abdominal muscles*, and thus to prosecute an inquiry not otherwise possible.

I will now describe the method which my present experience has led me to adopt, and point out some of those details in prosecuting it which are the most important.

The patient having been secured in the usual position for lithotomy, and rendered insensible, a rather short median-grooved staff is carried into the bladder and held by an assistant. The knife to be employed should be straight, the blade very narrow and about two and three-fourth inches long. *Vide* Fig. 1.

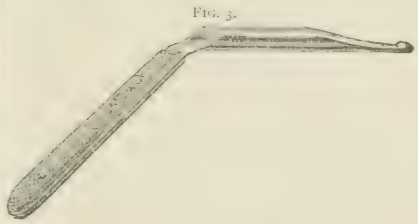
FIG. 1.



Natural size.

With this the operator makes a vertical incision of the skin in the line of the raphé, an inch and a quarter long, and terminating below about a half or three-quarters of an inch above the anus. Placing his left index finger, palmar surface upwards, in the rectum, so as to inform himself of the upper limit of the bowel, he introduces the knife with its cutting edge upwards, horizontally, into the wound until he reaches the groove of the staff, which should thus be struck about the junction of the membranous with the bulbous portion of the urethra. When contact is verified, the puncture of the canal is lengthened a little with the point of the knife, which is then withdrawn, incising in the act perhaps some of the tissues, so as to enlarge the wound towards the external orifice, but avoiding as far as possible injury to the bulb. A director resembling a small median gorget with blunt edges (the size and form of that which I use is drawn in Fig. 2, is passed into the groove of the staff and serves as a guide to the left index, which is insinuated into the

FIG. 3.

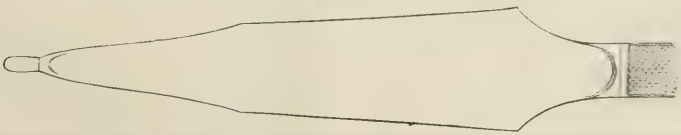


The same seen sideways.

prostatic urethra, and gently pressed onwards until the tip, slowly dilating it, enters the neck of the bladder. Arrived at this point, the operator should stand up, demanding the full effect at this moment of the anæsthetic agent, and with his right hand, press very firmly above and behind the pubic symphysis. By concerted movements between the left index finger and the right hand, he may now bring seriatim, every part of the interior of the bladder over the point of the index, and scrutinize the lining membrane so as to learn its physical condition to the minutest particular. If there is the smallest growth, recess, or inequality of any kind, or even roughness, an adhering scale, or small calculus, it is recognized with ease and certainty. Occasionally when the subject is very fat, and the prostate large, considerable pressure is necessary to make the exploration complete, and now and then it may be impossible to reach the whole interior, as I have found in one case only. But if the relaxation of the abdominal walls is absolute, it is surprising how far the contents of the pelvis, with the aid of an assistant, may be, by continued forcible pressure, brought down towards the perineum, and thus within reach of the operator's finger.

If, in the examination of the bladder a growth is encountered, the surgeon should devote two or three minutes to deliberately estimating its exact size, form, and density; its position in the bladder, and whether others are present also. He should do this again after he has reseated himself, with and without suprapubic pressure by his assistant, so as to be thoroughly acquainted with the situation of the growth. Then, withdrawing his finger, he introduces slowly a pair of forceps, straight or curved according to his judgment, to the spot, holding lightly a handle in each hand, when he will almost certainly seize the growth if he be careful and deliberate in his movements; much in the same way as he would in

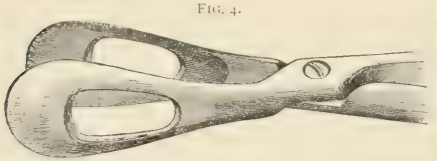
FIG. 2.



Outline of director intended to be of the natural size: but it is erroneously drawn, at least a line too wide at the broader end.

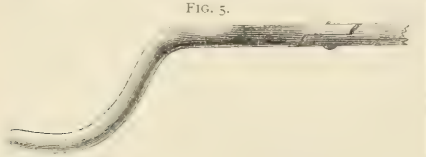
seeking a nasal polypus. Having assured himself that he has a fair hold, he is not to drag or tear out the body, or even much twist the forceps, especially if the material is dense, or he may injure the bladder itself. I find it better to "jamb" or "mash" together (if I may so describe the act) the rough margins of the forceps, before I endeavor to withdraw, and effect separation thus if I can. If this is not easily accomplished, I introduce the left index and complete the separation with the finger-nail if possible, which is sometimes a very efficient instrument. Proceeding thus, partly by forceps, of which I have employed numerous forms (see Figs. 4, 5, 6, and 7), partly with the finger, the removal of the

FIG. 4.



Straight forceps, which meet by serrated edges. The blade of the original instrument measures nearly seven-eighths of an inch wide.

FIG. 5.

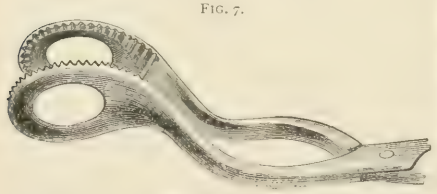


Small curved forceps, seen sideways; for growths close to the neck of the bladder.

FIG. 6.

The above forceps, seen from the front, showing separation of the blades to avoid nipping neck of the bladder.

FIG. 7.



Another form of curved forceps for seizing tumors springing from the sides of the bladder. The edges of all the forceps meet by serrated or roughened edge for the purpose of effecting a separation by the action described in the text. I have a duplicate set, the edges of which are cutting, for use with great care where the tissue is particularly firm, and on two occasions I have found them useful. The first named, however, should be employed if possible.

mass may be safely accomplished, entirely so if the growth or growths be simple and pedunculated; less completely when the base is wider, employing the forceps several times, carefully removing as much as possible piece by piece; and but very imperfectly if the tumor is mammillated and not at all pyriform in character. In the female I have sometimes slowly brought it within view, and have put on a ligature.

I think it is not unlikely that a small, slender écraseur, threaded with a flexible wire, stout catgut, or wire gimp, may be useful in some cases where single, but rather wide, peduncles are presented. Such an instrument has been made for me, and can be used by the side of the finger without requiring additional space, since the diameter of the shaft only equals that of a No. 10 catheter (English guage); but I have not used it yet.

There is one source of danger which I would point out, and which must be carefully guarded against. It may happen during the operation, that the assistant is required to press very firmly above the pubes, so as to bring the growth nearer to the operator. By doing so at this stage, it is quite possible that the upper part of the bladder may be inverted and pushed downwards in a fold, presenting itself toward the operator as an eminence, and be mistaken for a large polypus or growth, an error which might be fatal. The possibility of the occurrence should not be lost sight of; hence my admonition above to examine the bladder not only with, but without the influence of pressure, and so as to ascertain precisely what is to be removed before any attempt to do so is commenced. After the removal, whatever the result may be, a stout India-rubber tube about five or six inches long and the diameter of the little finger, is secured in the wound to wash out the débris and to serve as a channel from the bladder to some vessel placed for the purpose. Hemorrhage is usually free for a few hours and gradually subsides. If the tube causes irritation, it may be removed soon; if not, it may remain a day or two.

My entire experience up to this date may be summarized as follows: I have explored the bladder in thirty-two cases of obscure disease; four in the female, twenty-eight in the male, finding and operating for tumor in fifteen cases, two in the female and thirteen in the male. No extension of the incisions described was necessary in any case; in two of the cases (still living) no attempt was made to remove the mass, since the form of it rendered the achievement impossible, salient portions only were taken off. If a tumor, unusually large, demanded either extended incision or a suprapubic opening—but this must be a very rare occurrence—the operation should be thus continued, provided of course that the tumor is so formed as to admit of removal, otherwise extended incision would be unwarrantable. Eight of the cases of tumor are living at the present moment, at periods after the operation ranging between three years and six months. Three died soon after the operation, the others at various terms of several months, from reappearance or secondary malignant growth. Almost all form preparations in the museum of University College.[1]

[1] Twelve of the tumors were exhibited, as well as microscopic sections from them, to illustrate a paper read by the author at the Royal Medical and Chirurgical Society of London, in June, 1883.

In the other cases impacted calculus or other unusual conditions were met with, and the relief in some of them was conspicuous and remarkable. Obstinate chronic cystitis with large deposit of triple phosphates, and associated with frequent catheterism for atonied or obstructed bladder, was greatly relieved in several instances, and is indeed one of those forms of disease in which the proceeding may be often highly serviceable, if the tube is retained for a week or so, the urethra and the bladder being at rest during that period.

This brief summary of my experience warrants me, I think, in believing, and I trust my brethren will agree with me, that the proceeding described will enable us to prolong life in many cases, and to avert disease completely in some, where, without such aid, it must inevitably prove fatal.

NOTE ON THE VALUE OF ELECTRICITY IN SOME AFFECTIONS OF THE SKIN.

BY G. BETTON MASSEY, M.D.,
ELECTRO-THERAPEUTIST TO THE PHILADELPHIA ORTHOPÆDIC HOSPITAL AND INFIRMARY FOR NERVOUS DISEASES.

THOUGH this therapeutical agent is sometimes referred to in treatises on diseases of the skin, I am led to call especial attention to it at this time from a belief in the infrequency of its employment by dermatologists, and also in order to point out, very briefly, important differences that exist in the indications for the use of galvanism and other forms of electricity.

Now, I do not think that faradism can ever hold a prominent place in this connection. It is true that we have in faradic electricity, when properly applied, a means for powerful stimulation of the sensory nerves of the skin, yet I do not see that this can be of much practical value in the diseases in question. As a means of physiologically treating anæsthesia, pruritic symptoms, and other sensorial disorders it is unequalled, but when the disease is intimately connected with alterations of the nutrition it is manifestly powerless. When faradism is applied to the skin it should invariably consist of the rapidly interrupted current, and be applied in such a manner as mainly to confine its action to the surface. Such a purpose can be accomplished by selecting any bright, dry, metallic surface as the active electrode, some other portion of the patient's body being connected with the indifferent electrode, which should be well moistened. Instead of a smooth surface for the active electrode, I have for some time preferred to use an ordinary wire hair brush so altered as to admit of the current traversing the wire bristles when the brush is connected with the battery.

Franklinism has seemed to me to be similar to faradism in its action on the skin, with this difference, viz., franklinic sparks have a much more irritant effect, causing first a contraction of the elastic tissue, blanching, and the production of "goose flesh;" followed quickly by a decided relaxation, redness, and congestion, which latter condition may persist some hours. A daily continuance of the application will result in the production of an acne-like eruption. I am not aware that franklinism has ever been used by dermatologists, and would merely suggest to them the possibility of this very decided action having a therapeutic value.

It is, however, in galvanism that we have a promise of great usefulness in some of these affections, due mainly to its action in producing electrolysis, as well as stimulating ordinary tissue change, and thus altering the trophic processes in parts acted upon. For this end we can alone rely upon the constant galvanic current, passed with gentleness directly through the diseased portions of skin by a well-moistened electrode, preferably the cathode, the similarly moistened anode being applied to some other part of the body. Its alterative potentiality when thus applied may be readily inferred from a reference to its action in health.

When healthy skin is brought under the influence of the moist poles of a mild current, sensations of burning and tingling are very soon produced, and increase steadily in intensity as long as the current is allowed to continue or remains bearable. This continuous increase in intensity during the application is found with no other form of electricity, and is due to the changes produced in the skin during the passage of the current that tend to make the upper layers a better conductor. As the application continues we have, therefore, an increasing current passing through the circuit, and the increase of pain and redness admonish us that we may lessen the number of cells employed towards the close of the sitting, and yet have a greater amount of current than at the beginning. As a rule, it will be found that the sensation of burning presents an excellent measure of the amount of current passing. Not so, however, with the tingling; this varies greatly in different parts of the body, and in different situations on the same member, and is due to the accidental inclusion of sensory nerves in the influence of the poles. In addition to these sensations, and increasing *pari passu* with the burning, there will be found a decided redness under the poles, gradually becoming wheal-like in character, and, if the application is continued, eventuating in a decided blister.

The time consumed in these changes, taking a fixed number of cells for comparison, depends more on the character of the skin of the individual or of the part than it does on the distance between the poles. As an illustration, it may be said that in most individuals much more current will pass through a circuit including the body from the inner surface of one forearm to one of the popliteal spaces than will pass through a circuit made by placing the poles two inches apart on the back.

These considerations are important in connection with therapeutic applications, as conditions of disease greatly alter the conductivity of the derm—generally increasing it—and render a current strength that would be unfelt in health a powerful factor for good or evil.

In regard to the differing actions of anode and cathode on the skin, I will affirm the truth of the

following: A more irritant action possessed by the cathode; a peculiar blanching of the skin that precedes the redness under the cathode; and a brighter tint of redness produced by the cathode than by the anode. Beyond these facts I would not at present care to go.

As illustrations of the therapeutic value of galvanism in two of these affections, I will append brief summaries of three cases that occurred in my practice.

The first case was the wife of a farmer, who suffered from periodical attacks of intense neuralgic pain in the right hand extending up the arm as the paroxysm attained its height. Coincident with the decline of the attack (generally several days from its commencement) an herpetic eruption would appear at the seat of greatest pain, occupying an area an inch and a half in diameter in the middle of the dorsal surface of the hand. Occasionally a spot, one inch in diameter, in the middle of the palm would be the seat of the eruption instead of the back. This case being turned over to me by Dr. S. Weir Mitchell, for treatment at the Electrical Clinics of the Infirmary for Nervous Diseases, careful anodic galvanization was practised for some weeks, with the result of controlling greatly the eruption. The paroxysms of pain remained as bad as ever, however, and the case was only cured subsequently by division of the nerves supplying the part.

The second case illustrates the therapeutic value of the method in a much bolder light. A prominent member of the profession, in this city, called on me recently with a history of recurring attacks of eczema of the right upper lip. The attacks came on suddenly and generally lasted nearly a month, the lip becoming much swollen, painful, and productive of intense discomfort. Various plans of treatment had been tried by eminent brother practitioners, but all to no purpose. On this particular occasion he was especially desirous of averting the attack that had just begun, and came to me with the request that I would try galvanism. Cathodic galvanization was immediately begun and practised twice daily for something over a week. The first application caused a change in the sensations of the part and started an improvement which culminated in entire recovery a week later.

The third case was more chronic in character, but presents an equally happy termination. The patient, a member of the bench of a southern State, aged about sixty, had suffered from an eczematous eruption on the right hand for eight months. After fruitless attempts to eradicate the disease his physician sent him to me. Direct applications of the cathode to the diseased surface were begun, the electrode being held in contact as long as a gentle current could be borne—generally from two to five minutes. The patient's time being limited, these sittings were repeated thrice daily for twenty days, at the end of which time the disease had entirely disappeared.

1502 ARCH STREET

REMOVAL OF A SHAWL-PIN FROM THE TRACHEA BY OPERATION.

BY J. D. STRAWBRIDGE, M.D.,
OF DANVILLE, PENNA.

ON July 25, 1881, George S., a bright, active child of five and a half years, was left for a few moments to amuse his infant sister, and lay on his back on the floor, with the head of a small steel shawl-pin in his mouth, which was inhaled and lodged in the larynx. The mother saw him choking, ran to his assistance, thrust her finger into his throat to remove the cause, and forced the pin wholly into the windpipe, thereby relieving his breathing, but bringing on violent fits of coughing. The father, who was employed near by, was called at once, and brought the child in his arms to my office. After hearing the statements of the parents, who both asserted that they had felt the point of the pin with their fingers during fits of coughing, I took advantage of one, which soon occurred, to search the throat carefully with my finger, but failed to discover the presence of the pin. Although the child's face was flushed and swollen, the eyes suffused, breathing oppressed and wheezing, and cough frequent, I was still in doubt as to the pin having entered the larynx. I assured the parents that its removal from the windpipe could only be effected by an operation, but advised delay until its presence there could be positively ascertained, unless dangerous symptoms occurred, in which event I would operate at once.

Dissatisfied with this expectant course, the patient was carried about from one physician to another, until nearly every one in the place had been consulted. Each in turn having examined the throat and failed to find any trace of the pin, discredited the statements of the parents, and did not believe that a pin had been inhaled at all.

For two weeks after the accident, the health remained good, and but little inconvenience was experienced, except the cough and slight dyspnœa; after that time the fits of coughing became more severe, with increasing mucous expectoration and difficulty of breathing, followed later by chills.

On Saturday, August 27th, the parents came again to me with the child, and insisted upon an operation, notwithstanding the advice of their family physician, who assured them that it could do no good, and would only cause the death of the child. Finding the child's health becoming seriously impaired, and a fatal termination probably not far distant, I decided to operate, and appointed the following Monday morning, August 29th, for that purpose.

The patient was brought to my office; the anæsthetic was administered by Dr. Pursel, and Drs. Ogleby, Ammerman, Graul, and Mausteller being present. Assisted by Messrs. Neil and Hoffman, medical students, I commenced the operation by an incision through the skin from the cricoid cartilage to the sternum. To expose the trachea as low as possible required a very deep and careful dissection, as the neck was very short and thick. Very little

trouble was experienced from bleeding during the dissection, or from the division of the isthmus of the thyroid, which was found necessary. Two very large veins, united by a transverse branch at the lower end of the incision, covered the front of the trachea, and were the cause of considerable difficulty in its exposure. In attempting to detach and press them to one side, the left vein was injured, and had to be ligatured both above and below the cut. These veins, which I at first supposed were the inferior thyroids, I am now convinced were an anomalous development of the anterior jugular veins, and supplied the place of the external jugulars, which could not be found. The trachea was drawn up, and opened as low as possible; four of the rings were divided. The pin was readily found, and grasped with a pair of forceps. I attempted to carry it upward in the trachea, expecting to bring the head easily out through the incision, but was unable to move it either up or down. Seeing no alternative, I had an assistant take hold of the pin as low in the incision as possible with a second pair of forceps, while I maintained my hold above, and with a strong narrow-bladed bone pliers cut the pin between them. The point was easily withdrawn, but in cutting the pin the head portion was forced from the grasp of the forceps, and drawn by a strong inspiration into the bronchia. While casting about to select a suitable instrument, inversion of the patient was proposed by Dr. Pursel, and tried, but without effect.

The patient was returned to the table, and, having selected a long, slender pair of polypus forceps, the curve of which admirably adapted them to the purpose, I commenced to search for the lost portion of the pin. Expecting it had followed the most direct route, I passed the closed jaws of the instrument into the left bronchus, and searched carefully along its walls, until I could distinguish its principal division. Satisfied that it was not there, and that, from the size of the head, it could not possibly have gone further, I withdrew the instrument until I could enter the point in the right bronchus. Feeling carefully down this tube for an inch and a half or more, I struck the head of the pin. Slightly opening the jaws of the forceps, and turning them about, I was able, after a little search, to grasp the shaft of the pin. Knowing well that an attempt to withdraw the pin would probably result in serious injury to the bronchus, by forcing the shaft of the pin into its walls, unless the point was held in the jaws of the instrument, I drew the forceps back, feeling carefully along the shaft, until it had several times passed the end, and I was satisfied I held the point in the forceps. Applying gradually some little force without moving it, I was for a moment startled by the thought that the pin had been forced into the walls of the bronchus; but an instant's reflection assured me that this could only have been done by the forceps, and not without the pin having been moved from its original position, which had not been done.

Renewing my efforts, a little more steady traction brought the head suddenly from its position with a distinct sound which was heard by my assistants, and was withdrawn without further difficulty. The head of the pin, which was three-eighths of an inch in diameter, had been drawn into the bronchus at the commencement of an inspiration, and lodged against the first division, where it completely closed the passage, forming a perfectly tight valve, and prevented any further access of air to the right lung. The pin measured two and a half inches in length. The child breathed well by the natural passages after the extraction; and after he had returned to consciousness, a small fold of lint was laid over the incision, retained by a strip of adhesive plaster, and a light handkerchief tied about the neck. On the following morning the wound was closed by adhesive plasters, and in two weeks was entirely healed. The child has remained well up to the present time, perfectly free from any laryngeal complications, although three children of the family had previously died from croup.

MASTOID NECROSIS, MENINGITIS, DOUBLE OPTIC NEURITIS, AND ATROPHY OF BOTH OPTIC NERVES IN A CASE OF SUPPURATION OF THE MIDDLE EAR.

BY CHARLES SHAFFNER, M.D.,
ASSISTANT SURGEON TO THE EYE AND EAR DEPARTMENT OF THE PHILADELPHIA DISPENSARY.

ON October 29, 1883, G. M., girl, eleven years old, applied for treatment at the Eye and Ear Department of the Philadelphia Dispensary, suffering from a very interesting form of eye disease, which was due to a disease of the ear, which latter had existed for some time.

Five and a half years ago suppuration of the right middle ear set in, with severe earache. After the suppuration had existed for four weeks inflammation of the mastoid occurred. During this time she was treated at her home by her physician with syringing the right ear with warm water and poultices to the mastoid, which caused the abscess to break, and soon after this facial paralysis came on. She was sick seven months in her own home, and then went to a hospital. Soon after this she lost her sight, and was blind for six weeks. Maniacal delirium set in and would last for two or three hours at a time; kept up for three weeks, and was very severe, it being necessary to hold the patient down in bed. There was severe pain in the right side of the head, and all the symptoms of cerebral meningitis. She was treated with ice and cold dressings to the head.

In addition to the blindness, divergent strabismus now came on, while the sight began to be spasmodic, coming and going for two months, and then gradually improving up to the time of her visit to the dispensary. Three pieces of bone were discharged, one from the external auditory meatus and two from the mastoid region. Suppuration from the right external auditory meatus has kept up until now, and the mother, under advice, has only endeavored to keep the ear clean.

At the time of her entrance into the dispensary on

October 29th, she presented the following condition: O. D. V. $= \frac{10}{CC}$. She read some words in Jaeger's No. 8 type. Hypermetropia 1.5 D. Right disk was greenish-white in color, and its upper border was obscure. There was a crescent one-sixth of the size of the disk to the outer side. The right retinal vessels were small. O. S. V. $= \frac{6}{CC}$. She saw letters in Jaeger's No. 14 type. Hypermetropia 1.5 D. The left optic disk was greenish-white, and there was pigment on the disk. There was a white crescent in lower part of the disk equal to one-eighth of its diameter. Left retinal vessels were small. Both eyes were then in an advanced stage of optic nerve atrophy. The right ear was still suppurating rather freely, and the marks of the former mastoiditis could be seen in a large depressed scar behind the right auricle. The patient is still very dull and of rather feeble intelligence. She was ordered cod-liver oil, the suppurating ear was treated, and the patient kept under view.

The case is of great interest, as showing what serious complications can arise from an ordinary suppurating ear, and as showing such a clear chain of inflammation from the ear to the eye; first the mastoid trouble took place, then cerebral meningitis followed, to be succeeded by double optic neuritis, most probably descending neuritis, and that by atrophy of the optic nerves. It very seldom occurs to an eye and ear surgeon to see these two organs connected by such a sequence of events, and for that reason this case has been thought worthy of being noted.

HOSPITAL NOTES.

THE CINCINNATI HOSPITAL.

(Service of ROBERT SATTLER, M.D.)

INTERESTING CASES FROM THE OPHTHALMIC WARDS.

Reported by F. O. MARSH, Resident Physician.

RUPTURE OF THE ZONULA OF ZINN, WITH DISLOCATION OF THE LENS INTO AQUEOUS CHAMBER.

CASE I.—John G., æt. 57, stone-cracker, while engaged at his work, five weeks before coming into the house, was struck in the left eye by a large fragment of stone. The accident was followed by immediate loss of sight and great pain in the injured eye. Three weeks subsequently the pain subsided somewhat, and vision partially returned for objects at the periphery of the field. On coming into the house, October 5th, no external injury could be detected, but the eye was considerably injected and painful. The pupil was dilated to the utmost, and fixed, only a narrow rim of iris being visible. The lens was dislocated in its capsule into the anterior chamber, and completely cataractous. Between the rim-like iris, and the periphery of the opaque lens, which still preserved its original size and shape, could be seen a narrow belt of pupil. Intraocular tension + 2. Ordered salicylate of eserine gr. j aq. ʒij, instilled every four hours. No influence was exerted upon the iris, except that the pain was relieved and the intraocular tension was diminished.

October 15.—The lens was extracted through a lower linear section of the cornea, the knife being passed through the lens in making the corneal incision. Ordered absolute quiet in bed, and a compress bandage over both eyes. Subsequently a mild solution of boracic acid was used as an antiseptic lotion. Though the operation was attended with slight loss of vitreous humor, very little reaction followed.

COMPLETE LUXATION OF THE LENS IN ITS CAPSULE, BY SLIGHT PERCUSSION, INTO VITREOUS CHAMBER.

CASE II.—M. F., æt. 64. Had always had good sight, according to his own statement, with no symptoms to call attention to his eyes till one week before presenting himself to the clinic, when he had fallen on the floor from a sofa while asleep. The accident was followed by immediate loss of sight in the left eye. On admission to the clinic the lens could be seen luxated in its capsule, and lying in the bottom of the vitreous chamber completely opaque, and very movable. The iris was tremulous, the vitreous completely disorganized, and with the ophthalmoscope a large number of floating opacities could be seen moving readily back and forth through the pupillary area, between the anterior chamber and the vitreous, the whole interior of the eye being thrown into one common chamber. No pain or reaction; vision absent.

INJURY TO THE EYE WITH THREATENED PANOPHTHALMITIS; SYMPATHETIC TROUBLE; ENUCLEATION.

CASE III.—George H., admitted October 8th, colored, æt. 22, steamboat hand.

Two days before admission was struck in the right eye with a sharp stick, inflicting a contused and lacerated wound, extending vertically completely across the cornea, and penetrating also the iris and lens. Lacerated iris tissue and a small amount of opaque lens substance were protruding from the wound in the cornea. Lids swollen; chemosis of ocular conjunctiva excessive. Intense pain had existed in the injured eye since the accident. Dr. Sattler removed the protruding and mangled iris tissue, and evacuated the opaque lens substance. One-quarter grain of morphia was administered hypodermically in the right temple, and a four grain solution of atropine instilled into the eye every four hours; subsequently, a two grain solution every three hours; rest in bed, and ice applications.

October 9.—Slept well, pain much less, chemosis undiminished. Ordered equal parts unguent. hydrarg. and unguent. belladonnæ applied to right temple every four hours. Applied three leeches; ice applications continued; mercurial purge at bedtime.

10th.—Chemosis much less; pain subsiding; corneal wound gaping and edges vascular, but no tendency to suppuration. The opaque lens matter was completely removed.

24th.—Corneal wound healing, with slight indrawn condition of the corneal cicatrix, though the ball still preserves its rotundity; vision reduced to perception of light.

November.—The pain and inflammatory symptoms continued to subside until Nov. 16, when pains in and

about the eye again commenced. The injured globe became the seat of exquisite sensitiveness, and manifested, on pressure, the characteristic ciliary or point pain. A few days after this, the uninjured eye manifested all the signs of sympathetic irritation, and on November 20th these symptoms were so threatening and pronounced that enucleation of the injured eye was performed.

UNFORTUNATE RESULT OF A BADLY EXECUTED STRABOTOMY.

CASE IV.—Annie M., æt. 43, admitted October 17th, is very myopic, and also amblyopic. States that many years ago an operation was performed on both eyes by a travelling doctor to relieve a slight degree of strabismus convergens, which only existed at times. Ever since the operation she has been unable to turn her eyes from side to side without moving the whole head. At present, both eyes diverge enormously, with no power to move either eye, even to the median line. The right eye is more prominent than the left, but both eyes are exophthalmic. Double vision has never at any time existed, but sight has been very defective.

October 20.—An advancement operation of the internal rectus muscle of the right eye was made, together with a tenotomy of the external rectus. Ordered ice applications, rest in bed, and a firm compress bandage to both eyes.

24th.—Removed the stitches; no reaction exists; patient possesses the power to move the eye well beyond the median line; exophthalmus less pronounced.

REMARKS.—Case I. is interesting on account of its comparative rarity; rupture of the zonula of Zinn and dislocation of the lens entire in its unbroken capsule, being unusual in an eye free from previous disease. It is perhaps not a little remarkable too that, considering the necessary violence of the injury, rupture of the sclerotic did not occur. The fact that the luxated lens acted as a foreign body, causing considerable pain, and producing secondary glaucoma, rendered its removal imperative. The operation of course differed from the ordinary cataract extraction, in that no iridectomy was required. On the contrary it was a desirable object, yet a point which was not attained, to contract the iris by the use of eserine into a barrier behind the lens to prevent its recession backward into the vitreous, during the attempt at extraction. The operation was performed by making the corneal puncture a little back of the sclero-corneal limbus, and then by a quick movement spearing the lens thus preventing its escape into the vitreous during the completion of the corneal incision. The lens was then readily expelled by the ordinary manipulation. At present, she counts fingers with a + 3½ lens, and sees objects about the room. No rupture of the choroid exists. The iris is still dilated, and two distinct rents are visible as the result of the passage of the lens into the anterior chamber.

In Case II., in contrast with Case I., it is interesting to note, that a pathological process must have been progressing for a length of time previous to the accident, without any apparent inconvenience to the patient, yet of such a nature as to allow the complete luxation of the lens in its capsule by a comparatively slight percussion. The eye being perfectly non-irritable, no interference was instituted.

In Case III., owing to the extensive character of the injury, including a lacerated cornea, iris, and lens, a kerato-iritis of a suppurative character, or even panophthalmitis and subsequent phthisis bulbi, was imminent; but by a timely interference and the use of rest, cold applications, leeches, etc., immediate danger and more protracted suffering were avoided, and the untoward results threatening seemed to have been warded off. The hope of obtaining a perfectly non-irritable eye, free from the danger of inducing sympathetic trouble, was in this case, in spite of the careful removal of the iris tissue and removal of the lens, thwarted by the rapid and violent development of sympathetic irritation of the fellow-eye, which necessitated the prompt removal of the injured one.

Case IV. is an unusually striking example of the unfortunate results that may follow a badly executed strabotomy, where the muscle is divided too far from its tendinous insertion, and the power of convergence altogether destroyed, thus causing a deformity much more serious than the original squint. The operation of advancement was attended with great difficulty, owing to the atrophied and shrunken state of the rectus internus muscle. An endocapsulitis had also existed, doubtless as the result of the previous operation, causing extensive adhesions between the capsule of Tenon, the sclerotic, and the tendon of the rectus externus.

These circumstances, combined with an unusually thin sclerotic, made tenotomy of the external rectus extremely difficult. The advancement of the external rectus was made by passing a double thread through its tendon and the conjunctiva at that point, and bringing it well forwards and stitching to the conjunctiva above and below near the corneal margin. It should be added also that the existence of a high degree of myopia (12 D.) makes it evident that the strabismus for which the original operation was performed was apparent rather than real, and was not due to, or associated with, excessive power on the part of the internal recti muscles.

MEDICAL PROGRESS.

THE OPERATIVE TREATMENT OF PROLAPSE OF THE UTERUS.—At the meeting of the Medicinische Gesellschaft, in Giessen, on May 1, 1883, DR. KALTENBACH spoke of the results of the operative treatment of this affection as opposed to the treatment by means of pessaries, etc. The latter, he said, are seldom satisfactory for complete retention of the prolapsed organ, and must be often changed; moreover, there is the danger of bad consequences from too great pressure. The operative treatment is easily carried out, and, with the proper antisepsis, is almost entirely devoid of danger. Of more than one hundred cases of operation for prolapse, he has had only one case of severe sickness.

The operation should only be performed on recent cases and slight degrees of dislocation; it should not be performed on very old people, as the anæsthesia and the subsequent confinement are dangerous.

Kaltenbach reported the case of a women aged sixty-one years, in which the usual orthopædic treatment had completely failed. The vagina was totally inverted, and the thickened bladder wall and Douglas's pouch extended to the extremity of the prolapse. At the first operation,

one and four-fifths of an inch of the supra-vaginal neck was excised. Three weeks later, colporrhaphy and colpo-perinæorrhaphy were performed. The case was a complete success.—*Berliner klin. Wochensch.*, Nov. 19, 1883.

EUCALYPTUS IN GANGRENE OF THE LUNGS.—DR. BONAMY relates the case of a man, about fifty years of age, who was admitted to hospital suffering from cough, dyspnœa, and fever. A few days after admission, the fetid odor of his breath became so extreme that it was necessary to separate him from the other patients. There was dulness in the axillary line on the left side over the middle portion of the lung. At this point there was tubular respiration, and crepitant râles were audible at the end of inspiration. The sputa consisted of a black matter, detached portions of which were swimming in an abundant serous fluid. The cough was incessant, and the odor intolerable. A diagnosis was made of gangrene of the lung of superficial extent. The patient was first put upon a mixture containing carbolic acid, but no improvement following, this was replaced by tincture of eucalyptus. In two days after the last prescription the odor of the breath was much less offensive, and in less than two weeks the patient was cured.—*The Practitioner*, Dec. 1883.

ALIMENTATION OF CHILDREN AFTER TRACHEOTOMY.—PROF. SAINT-GERMAIN, in a recent article on this subject in the *Revue Mensuelle des Maladies de l'Enfance*, gives directions for the proper feeding of children upon whom tracheotomy has been performed. The children generally refuse food, and are consequently deprived of the means of building up the strength.

This is due to several different causes; one of the first is the bad disposition of the child, which has not been sufficiently controlled. Pain on deglutition is another, often caused by the wide and deep eschars produced by the cauterizations so frequently and unwisely applied by a great number of physicians. Others again, especially in an advanced stage of the disease, are affected with paralysis of the palate which makes deglutition impossible, as all liquid food is regurgitated through the nose.

M. Saint-Germain has employed, in all these cases, a procedure which has been recommended and used after surgical operations on the mouth or tongue which incapacitate the patients swallowing. A caoutchouc sound of medium calibre is introduced through one nostril, and passed into the stomach. Through this, milk, bouillon, wine, and other liquid foods may be injected—such as are employed in ordinary practice when a liquid diet is necessary.

This procedure has been used a large number of times at l'Hôpital des Enfants, and has given most excellent results. It is easily performed, there is no danger of making a false passage, and the canula already in the trachea precludes the possibility of the sound going into that passage.—*Bull. Gén. de Thérap.*, Nov. 30, 1883.

BROMIDE OF ETHYL AND NITRO-GLYCERINE IN NERVOUS DISORDERS.—PROF. O. BERGER has found bromide of ethyl useful—(1) In neuralgic conditions of the nerves of the face and head, in megrim, and in nervous headache and heaviness. The inhalation of twenty to forty drops of the remedy several times a day has lessened headache in cases in which quinine, salicylic acid, caffein, and guarana had all proved useless; and in three cases of headache connected with cirrhosis of the kidney, it was better than any other remedy. (2) In neurasthenia; it is here given in doses of from one to three grammes twice or thrice a day if necessary. (3) In epilepsy; here it is of very little use, although Bourneville and D'Ollier considered it useful. They narcotized their patients daily for ten to twenty minutes with it, but when given in doses of one gramme daily by inhalation it is useless. It is besides expensive, and causes much depression. When inhaled before or during the epileptic attack, it only prevents it or cuts it short in exceptional cases. (4) In hysteria it is of more use. The attack of hystero-epilepsy may sometimes be cut short by narcotizing with it for ten or fifteen minutes, eight to twelve grammes of the drug being required. When given in doses of a half gramme to two grammes by inhalation once or twice a day, it may avert a threatened attack of hystero-epilepsy. (5) In several cases of psychical excitation the bromide of ethyl has proved serviceable. The author finds nitro-glycerine also useful in headache. —*The Practitioner*, Dec. 1883.

SOLID TUMORS OF THE ROUND LIGAMENT.—A recent number of the *Archiv für Gynäkologie* contains a careful paper on this subject by DR. M. SÄNGER, of Leipzig. These tumors belong to the connective tissue group, their structure being that either of myoma, fibroma, sarcoma, or a combination of these. The author has collected twelve such cases, to which he adds a hitherto unpublished one of his own. In situation, he points out, they may be either *intra-peritoneal*, that is, growing from the part of the round ligament which is within the peritoneal cavity; *intra-canalicular, i. e.*, in the inguinal canal; *extra-peritoneal*, that is, arising from the round ligament outside the inguinal canal; or they may grow from the abdominal wall, in such proximity to the origin of the round ligament that their connection with that structure may be inferred. The third, or extra-peritoneal variety, are the commonest. Most of them are fibroid in structure. In eight out of ten of Dr. Sänger's cases the tumor was on the right side; and he asks, "Does this arise from causes similar to those which cause a greater frequency of inguinal hernia on the right side?" He cannot trace a predilection for any particular age. All the patients had borne children. The growth of these tumors is usually slow; during pregnancy they seem to increase with greater rapidity, and during the lying-in period to undergo a temporary retrogression or involution. The only exciting cause that Dr. Sänger can find, and this only in one case, is long-continued or severe pressure. The growths themselves appear to cause no symptoms until they get large, and then they may be painful and tender, and cause symptoms by pressure or dragging on other parts, such as dysuria, ovarian pain, constipation, abdominal and sacral pain, etc. They may thus deteriorate the general health. The diagnosis is extremely difficult; and there hardly seem to be sufficient grounds for formulating any diagnostic points. The only treatment of these tumors is removal. This is called for not only on account of the symptoms they cause, but also because of their liability to accidental injury and inflammation in consequence of their superficial situation.—*Medical Times and Gazette*, December 1, 1883.

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THE MICROCOCCUS OF PNEUMONIA.

THE micrococci of pneumonia, as described by FRIEDLANDER and FROBENIUS in their recent researches as abundantly present in the exudate into the alveoli in the acute form of the disease, and in the lymph passages of the affected lung, are, in most instances, surrounded by a more or less thick capsule, which is stained pale blue in gentian violet and fuchsin. The capsule is frequently broader than the coccus itself, externally sharp contoured, and adapts itself to the shape of the latter, being elliptical or circular as this happens to be. Two adjacent micrococci may be surrounded by one capsule, producing an elongated ellipse. In other organisms, again, the central coccus is completely wanting. The pneumonia-cocci are, however, never found in zoöglœa masses.

On account of the different reaction of the capsules, their solubility in water and alkalies, and their insolubility in acids, Friedlander believes that they are composed of mucin or a closely allied substance. The capsules are most easily and quickly demonstrated by staining the dry preparation with a solution of aniline and gentian violet. The cover glass, on which the preparation has been dried, is placed for half a minute in alcohol, by which the ground-substance is quickly and the capsule and cocci more slowly decolorized. The preparation is then placed in distilled water, in which it may be studied, or preserved in Canada balsam or damar. The cocci may also be stained in eosin.

Such a capsule-formation as this, in which the individual micrococcus is surrounded by a well-marked gelatinous capsule, has not previously been observed in cleft fungi; or at least in no other micro-organisms found in the human body is a gelatinous capsule of such decided thickness found as in the pneumonia-cocci.

The capsule-bearing micrococci have also been found in the pneumonically infiltrated lung-tissue itself, very abundantly in the pleuritic and pericardial exudate, as well as in the serous infiltrated pleuritic adhesions in cases in which these were the result of a preëxisting pleurisy. They were also found in the non-infiltrated, but œdematous, parts of both lungs when there was pneumonia of one lobe only, death occurring in the stage of acme. On the other hand, they were not found in the blood or other organs. In several cases of true croupous pneumonia, which had lasted more than six days, true cocci were found in the blood, but no capsules. In other instances, only a part of the cocci were provided with capsules. But in other fresh cases, where death occurred during the advance of the disease, the capsules were invariably present. It may, therefore, be said that the capsules correspond to the highest stage of development of the fungus, and are a necessary product of the living phenomena of the organism.

Culture-experiments demonstrated that the micrococci exhibited some peculiarities in the different animals. In the pneumonia of men it will be remembered that there were differences in size and structure of the cocci. In the mouse the cocci are considerably larger than in man—from two to three times the size. In guinea-pigs they are usually smaller than in mice, but have, on the other hand, a very broad capsule. In dogs they are about the same size as in man. In all species there are found more frequently than in man, along with the cocci, rod-shaped bodies of different length, but mostly as long as the double coccus, and always surrounded by the characteristic capsule.

The important bearing of these new observations if confirmed, on the cause and nature of pneumonia, is evident. To many who have had clinical experience with this affection, it will not be a surprise to find facts adduced which lend support to the view that it is an infectious disease, for there have not been wanting features in the clinical history of many cases which favor such a view, while some observers have long been satisfied as to its infectious nature. Among these, we believe, is Prof. Austin Flint, Sr. The bearing of these views upon the prophylaxis and treatment of pneumonia has yet to be determined; but there is reason to expect that both may be materially modified if it be eventually determined that it is an infectious disease.

SANE OR INSANE? REPORT OF THE MEDICAL COMMISSION ON THE CASE OF JOHN McGINNIS.

JOHN MCGINNIS, convicted of the murder of his mother-in-law, and now awaiting the death penalty, is alleged to be insane. A commission appointed by the Governor of Pennsylvania, consisting of Drs. Jones, Moon, Mills, Andrews, and Morton, have been engaged for several weeks in investigating the case, and have terminated their labors by a majority and a minority report, the latter signed by Dr. Morton. As regards the composition of this commission, it may be well to state that three of them—Drs. Jones, Moon, and Mills — are alienists and neurologists, Dr. Andrews is a physician and surgeon, and Dr. Morton is a surgeon. There were no medical or surgical questions, apart from the mental condition of McGinnis, to be decided.

The majority report, signed by all except Dr. Morton, is emphatic in declaring that McGinnis is insane; that he has "delusional monomania," and "chronic alcoholic insanity." The reasons for this conclusion are given in detail. The family history of the criminal is marked by a strong neurotic tendency, and he has exhibited from an early period peculiarities of mind and very pronounced moral obliquity. He had been addicted to drink, to other vices, to crime. The report very justly maintains that a disposition to vice and crime is an evidence of mental unsoundness, rather than of superior powers of mind. But the proof of his insanity is the existence of delusions of suspicion and persecution. Up to the time of his incarceration, his sole delusion was of "marital infidelity;" afterward he became suspicious of his counsel and spiritual advisers, and subsequent to his conviction he had hallucinations of sight and hearing; he had visions and heard voices. Such is the case of the majority.

The minority report, made by Dr. Morton, is a clear and strong presentation of fact and opinion, and is, it need hardly be said, the antipodes of the majority report. Dr. Morton questions the accuracy of the family history told by those interested in saving McGinnis from the shame of the gallows; and he denies the correctness of a diagnosis which confounds a mad, but not causeless, jealousy with a systematized delusion. As regards the hallucinations of sight and hearing, and the delusions of suspicion and persecution, they are held to be feigned; McGinnis, at the time of the Guiteau trial, having expressed himself confidently as able to simulate insanity more successfully, and these symptoms of mental derangement having manifested themselves since his trial ended.

As the counsel for McGinnis did not enter the plea of insanity in his defence, nor in the argument for a new trial, the prominence given to this point since his conviction rather indicates, as Dr. Morton suggests, that it is an afterthought—an inspiration born of an urgent necessity. Up to the time of McGinnis's arrest and conviction, the only evidence of mental derangement consisted in the "delusion with reference to marital infidelity." There can be no doubt that the psychosis called chronic alcoholic insanity is marked by the presence of delusions connected with the sexual relation. The so-called delusion of McGinnis does not, however, conform to the usual clinical definition of that affection. It was not marked by the hallucinations of the sexual functions, so characteristic of alcoholic insanity. McGinnis was simply madly jealous, and not without reason, according to the evidence of reliable witnesses. Furthermore, his supposed delusion does not appear to have been preceded by the usual alcoholic delirium, nor by those somatic derangements belonging to chronic alcoholism. If the doctrine of insane delusion be interpreted according to the ruling of the majority report, many persons now considered sane are fit for asylum restraint. McGinnis had an insane delusion because he could not be convinced of the purity of his wife. The believer in ghosts or in spiritual manifestations must also have a delusion, because he holds to the truth of certain hallucinations, regarded as such by the most of mankind, and of the falseness of which he cannot be convinced. McGinnis's belief in the infidelity of his wife, had been a delusion, if coupled with other insane conceptions related thereto; if, for example, he was convinced that his sexual organs had been bewitched by the machinations of his wife's paramour. It is not alleged that previous to the murder, McGinnis associated any hallucination, whatever, with his notion of his wife's unfaithfulness.

Since the original report was made, a supplementary communication has been addressed to Governor Pattison by the majority, setting forth that McGinnis has now distinct hallucinations of hearing, and, to some extent, of vision, and reaffirming their opinion. If these symptoms are not feigned—admitting their genuineness—they have diagnostic value now, only as throwing light on the question of responsibility at the time when the crime was committed. For these reasons we believe that Dr. Morton's objections to the theory of chronic alcoholic insanity, which is put forward in the majority report of the Commission, are well founded, although the conclusion at which they have arrived may be correct.

The mental symptoms which have appeared subsequently to the trial; the delusions of suspicion and persecution; the hallucinations of sight and hearing, and an ecstatic religious state are, in the majority report, regarded as genuine manifestations of the alcoholic psychosis, but, in the minority re-

port, held to be feigned. The unsystematized delusions of persecution consist in a vague distrust of his lawyer and of his spiritual advisers; but if every man who fails in gratitude to those who have befriended him unsuccessfully, must be laboring under an insane delusion, then surely must our conception of insanity be greatly expanded. Although it is true, as stated in the majority report, that malingerers feign either acute maniacal delirium or dementia, McGinnis, who had studied the Guiteau case, might be expected to act with more acuteness, and conceive a higher ideal of mental perversion. The coincident appearance of these hallucinations with the efforts to procure a mitigation of sentence, is, at least, a suspicious circumstance, for surely his counsel would not neglect such an opportunity had these mental symptoms existed before the trial. But, considered of themselves, the hallucinations at this period, as well as before the trial, as above stated, were not in harmony with the clinical characteristics of chronic alcoholic insanity, for in this malady the delusions are usually connected with the sexual organs, indeed, we may say almost invariably when marital infidelity enters into the insane conceptions.

In the suggestive report of Dr. Morton, the business capacity of McGinnis is insisted on as an evidence of his responsibility. Although insanity is not incompatible with the possession of considerable powers of mind, responsibility before the law involves many considerations. We have always maintained in these columns, that capacity to distinguish right from wrong, and the will power to do the right and avoid the wrong, should constitute the criterion of responsibility. John McGinnis knew the nature of the act he intended to commit, and the consequences; the law gave him the power to obtain redress for any wrong done by his wife; he choose to execute vengeance in his own way, and thus deliberately accepted the consequences. Had he heard a voice from Heaven, in the genuineness of which he believed, and in response to which he acted, he must be considered irresponsible before the law and in the judgment of all alienists and jurists; but his auditory hallucinations had no connection with the commission of the crime.

HIGH AMPUTATIONS FOR SENILE GANGRENE.

AT a recent meeting of the Royal Medical and Surgical Society, a most important question was raised by MR. JONATHAN HUTCHINSON on the treatment of senile gangrene, or that form of mortification which is due to calcification of the arteries, by amputation of the limb at a good distance beyond the seat of the lesion. In gangrene of the toes and foot, the lower third of the thigh should be selected, and the middle of the arm in the rare cases in which the hand is affected.

The practice advocated by Mr. Hutchinson has been taught in this country for many years by the elder Gross, who based it upon the fact that the disease in the vessels of the lower limb, as demonstrated post-mortem, extends at least as high as the popliteal artery. He, however, maintains that we should await the formation of the line of demarcation, while Hutchinson advises that the operation should be resorted to as soon as the patient is sufficiently ill to take to his bed, and the affection is well established.

Senile gangrene and dry gangrene are not synonymous. In the large majority of cases our own observations confirm the statement of Mr. Hutchinson, that it is moist. Hence, if the case be allowed to pursue its own course, death generally ensues from septicæmia before the line of demarcation is formed, spontaneous recovery, especially when the affection extends beyond the toes, being a curiosity. In a smaller proportion of cases the fatal result is due to exhaustion and pain.

For these reasons we regard the recommendation of Mr. Hutchinson as being most timely and rational, and the opinion of those who took part in the discussion was also, as a rule, favorable to the practice. In this country, the younger Gross has invariably insisted, in his lectures, upon early and high amputation to prevent septic infection. The only objection that can be urged against the procedure is the danger of amputation of the thigh in old subjects, but the risks are, at the present day, reduced to a minimum by the employment of anæsthetics, Esmarch's bandage, and aseptic precautions. Our firm conviction is that everything is to be gained by throwing aside old traditions and superstitions in the management of senile gangrene. Left to itself, the disease rarely terminates in recovery; if amputation be performed near the seat of the trouble, the flaps are liable to die; if performed early and high up, amputation is likely to save life, as in the cases recorded by Hutchinson, James, Dix, Rivington, and Godlee.

DIGITAL EXPLORATION OF THE BLADDER.

In the current issue of THE MEDICAL NEWS, SIR HENRY THOMPSON calls attention to a mode of exploring the bladder in cases of obscure disease, through which the existence of suspected lesions may be accurately determined, and the proper remedies be applied for their relief. In systematizing the procedure, he has done for the male what Simon, of Heidelberg, upwards of seven years ago, did for the female. It will be remembered that the latter surgeon rapidly dilates the urethra with specula of

hard rubber, if necessary up to a diameter of four-fifths of an inch, through which he is enabled to explore with the finger the entire inner surface of the organ. Simon's operation is as free from danger as the median perineal incision in the male, and is not followed by incontinence of urine.

In nearly one-half of the explorations made by Sir Henry, tumors were detected, and more or less thoroughly removed with the instruments described in his valuable communication. The wonder is that neoplasms existed in so many cases, and if the proportion be found to be as great after a more extended experience, it will be of great aid to the surgeon in diagnosticating tumors in obscure vesical disease.

CATHETER FEVER.

ON December 13th, at the Medical Society of London, SIR ANDREW CLARK read a characteristic paper on "Catheter Fever," which was the occasion of a most remarkable discussion. The whole of the matter appears to us to lie in a nutshell. About 1865 Sir Andrew Clark evidently saw a case of what Sir Henry Thompson and other surgeons would call continued or chronic urinary fever. This case died, and at the autopsy Sir Andrew found no lesion whatever of the renal tissues or ureters, but the bladder was hypertrophied, and the seat of a sloughy inflammation. All the constitutional signs of the disease of which the patient had died, had ensued on the use of the catheter at the commencement of what Sir Andrew would term "catheter life." It is important to mention that in the case in question, the patient passed water too frequently; the urine was of low density, and although it contained no albumen, it might possibly have been the urine of a man the subject of chronic Bright's disease.

Having narrated a typical case of catheter fever supervening on undoubted prostatic enlargement and "overfull" bladder, Sir Andrew gave a most instructive historical account of "fever" resulting from surgical interference with the urinary organs. He showed how such a fever had been recognized by physicians in the very beginning of the present century, how Velpeau in 1841 had made post-mortem examinations in such cases, how Marx, and later on Malherbe, Henry Thompson, Fayrer, and others had studied the question. It resulted from all this that many observers of repute had been as unable as Sir Andrew himself to discover alterations in the kidneys of certain cases. It was not denied that many of the cases had died with well-marked signs of interstitial nephritis, as Marcus Beck had so ably and conclusively shown. But Sir Andrew contended that there were a limited number of such cases which could not be written down as examples of death from renal disease.

This question of the involvement or not of the renal organs, evidently is the pivot round which the whole controversy turns. Is Velpeau wrong, are Marx and Malherbe wrong, is Sir Andrew Clark wrong? Now, with all due respect to the great authorities mentioned, we must give it as our unqualified opinion that these observers are in error. And for the following reasons: Velpeau's work having been done forty years ago, we submit that, from a correct histological point of view, it cannot be of any value because of its age. The methods of histological research have improved so vastly; we know so much more of the normal and abnormal appearance of tissues than we could have done forty, twenty, nay even ten years ago. And we say this in a judicial spirit. We have every belief that these observers spoke the truth so far as they knew it. But we repeat that what we want, is some sections made by Velpeau or Marx or Sir Andrew, or any other individual, taken from the renal organs of patients who have succumbed to the continued form of urinary fever. Let us examine these sections, and let us declare that there is nothing morbid in their texture, and we will humbly apologize for our present disbelief in the facts themselves. We feel firmly convinced that in these examples we should find microscopic evidence in the shape, say of little collections of leucocytes in the interstitial tissue of the renal organs.

Sir Henry Thompson made a most excellent, judicious, and exhaustive speech on the question, repeating most lucidly his views as contained in his work on the *Diseases of the Urinary Organs*. Mr. Berkeley Hill had never failed to find interstitial nephritis in autopsies made by himself or in those performed in University College Hospital during the past few years. Mr. Scovell Savory also gave a very good address, in which he advocated the claims of some of the cases to be regarded much more as resulting from nervous disturbance, of the nature of prolonged shock, than of septicæmia. Mr. Reginald Harrison advocated the septic view of the disease.

THE ACCIDENT TO GENERAL GRANT.

AS GENERAL GRANT stepped from his carriage in front of his residence in New York on the evening of December 24th, he slipped on the ice and fell, striking heavily upon the outer and upper portion of his left thigh. The pain was extreme, and the inability to use the limb complete. The fall, the age of the patient, and the subjective symptoms suggested probable fracture of the neck of the femur, and the incomplete examination of the limb, which alone was possible at first because of the pain, did not entirely exclude this diagnosis. After the lapse of thirty-six hours the pain subsided, and then a

thorough examination made by Dr. Fordyce Barker and Dr. L. A. Stimson, who are in attendance, failed to discover any objective signs of fracture.

The injury, we are authoritatively informed, appears to have been a severe contusion of the outer and upper portion of the left thigh, with possible rupture of muscular fibres or attachments in the effort to avoid the fall.

On Monday, the 31st, the General was able to sit up for some time, and his early recovery is confidently anticipated by his physicians.

REVIEWS.

HEART AND SCIENCE. A STORY OF THE PRESENT TIME. By WILKIE COLLINS.

FICTION has been used more than once already in that fight against certain ways of increasing our knowledge which is called the "Anti-Vivisection Movement." Once there was that original assertion which the "Zoöphilists" made that Harvey had never used living animals in his researches. Again, they said that Sir Charles Bell had made his most famous discoveries without vivisection. Of course these agitation-mongers never thought it worth while to verify their references to these authors. But lately fiction has been brought to the aid of the movement in a different and more legitimate way, in the shape of a novel,[1] in which Mr. Wilkie Collins, with all his characteristic energy, has come to the assistance of the cause.

That Mr. Collins should write an "antivivisection novel" is proper enough, and no doubt it pays him well: that the old arguments should be repeated is natural, because there are no new ones. Clear reasoning or true logic is scarcely to be looked for, because the whole agitation against experiment has become a sort of religion of faith—a belief, a matter of sentiment simply, not a result of reasoning processes. Even those of the believers who will argue the queston at issue are like the Scotchman who was "open ta conveection but wad like to see the mon that could conveence him." We expect then none of these things in the book—but we may reasonably assume that in a "novel of purpose" the characters are intended for types of their classes. Accordingly we find two medical types—the hero and the villain of Mr. Collins's tale. The hero, Mr. Ovid Vere, is a young physician of extraordinary abilities, and a most commendable tenderness of heart. That he should faint when the villain treads by accident upon a beetle is perhaps praiseworthy, and that he should turn pale and tremble at the mention of "vivisection" is perhaps not to be wondered at, considering the subject and object of the book. His superhuman abilities are manifested by his publishing the MS. bequeathed to him by a mulatto physician whom he has attended on his death-bed in Quebec. This work contains the solution of that obscure problem in the treatment of "brain disease" to which the villain has devoted years of labor and many "vivisections." This same problem, Mr. Collins tells us, "has thus far been the despair of medical men throughout the whole civilized world."

The second typical character is the wicked doctor, a "vivisector," who, like all who seek by the aid of experiment to increase knowledge, is tall, dark, hideously ugly, and so utterly without moral sensibility of any kind that he allows the cousin and betrothed of the hero, who falls ill in his absence, to grow worse and worse in order that he may study the uncommon phase of disease which she represents, to wit, simulated paralysis of a hysterical nature, and he thinks it very strange that the lover on his return should be angry. Dr. Vere has brought with him his legacy of knowledge from Montreal. Certain cases related in the book are, of course, precisely like the girl's and he is enabled to effect her cure. The preface of the great treatise is quoted against the "useless and detestable cruelties which go by the name of vivisection." On reading further we find his subject is hysteria. It is very probable that all the additional knowledge of the treatment of hysteria in a human female that he could have derived from the examination of a dog's brain, would scarcely have repaid his trouble. When Carmina is recovering, Mr. Vere is much amazed and alarmed to find a lapse in her memory of some days—not an unusual incident in severe hysterical cases. Finally, the villanous vivisector, Dr. Benjulia, finding himself forestalled in his grand discovery, makes his will, leaving everything to Vere's half-sister, of a child of whom he is fond. Mr. Collins allows him one human feeling—turns loose the animals from his laboratory, shuts himself up with a laudanum bottle, fires the uilding, and so dies. "His brethren of the torture-table attended the funeral in large numbers."

Now what a muddle of nonsense is all this! We have too much respect for Mr. Collins's abilities to suppose that he seriously intended these people for types, or these screams of abuse for argument, nor do we think that he really believes most or many students in experimental science to be like Dr. Benjulia. We rather think that the novelist, looking about him for a subject, seized upon one of the English crazes of the moment to supply fuel for the boiling of his own pot.

He does produce one argument, other than simple abuse, against vivisection, under which name he apparently includes all experimental research. Let us examine it for a moment; it is formulated thus:

"The law which forbids you to dissect a living man allows you to dissect a living dog. Why? There was positively no answer to this. Suppose he said, Because a dog is an animal? Could he, as a physiologist, deny that a man is an animal, too? . . . . Because the dog is the inferior creature in intellect? . . . . But the lower order of savage or . . . . lunatic, compared with the dog, is the inferior creature in intellect: . . . . the dog has, on your own showing, the better right to protection of the two. . . . . Because . . . . a dog is a creature without a soul? . . . . How do you know? . . . . If the law, in the matter of vivisection, asserts the principle of interference, the law has barred its right to place arbitrary limits on its own action—if it protects any living creature, it is bound, in reason and in justice, to protect all." (Chap. XXXII.)

The arguments are hollow, and the conclusion absurd and inconsequent. Even the most determined zoöphilists have not turned vegetarians, and the only one we have

[1] Heart and Science. A Story of the Present Time. By Wilkie Collins.

heard of who says she will refuse to profit in any way by knowledge gained in ways so abominable—we mean Miss Cobbe—has not, so far as is known, attempted to live up to such an absurd quibble as this, and forego therefore her daily beef or mutton.

A practitioner is next presented to us who wishes an opportunity to expose the "false pretences under which English physiologists practise their cruelties." He writes, seeking this chance, a letter to a publisher, in which he is foolish enough to say that there is no "proof that the effect of a poison on an animal may be trusted to inform us with certainty of the effect of the same poison on a man." He instances the insusceptibility of pigeons to morphia. We thought that it had long since been sufficiently demonstrated that the different actions of drugs (we do not know why he speaks only of *poisons*) on man and on animals are matters of degree, not of quality, or are dependent on the differences of habit or of organization. If enough opium be given a pigeon, it dies; it has no immunity from the poison; and it dies with the same symptoms that a man opium-poisoned exhibits. He goes on to speak of the "infernal cruelty" of those celebrated "baking-alive" experiments, and says that they have given us nothing new in the treatment of scarlet fever. Perhaps they have not; but they have greatly added to our knowledge of how fever kills, and what its processes are. With accurate knowledge of how a disease or a poison kills, we stand no longer in the position of the blind man with a club, sometimes striking the disease and sometimes the patient, who represents the physician in D'Alembert's fable.

This wise "practitioner" also insists that it is a pretence that our practice of surgery has ever been improved by experiments on animals. Doubtless he had been educated for a novelist, not for a physician, and had never heard of Sir Astley Cooper's experiments on the formation of bone, or of Cohnheim's on inflammation, or of Hunter's or Heidenhain's on the surgery of tendons, or of how Simpson proved the usefulness of chloroform.

Mr. Collins's doctors are all equally absurd and impossible, unless it be the happily named Mr. Null, who is an excellent portrait of a respectable, stupid, old-fogy, routine practitioner, who might be expected to say, being forty years or so behind with his facts, that nothing had ever come of vivisection.

Were it not for the general public interest in what is called vivisection, this book would call for no notice from us. It is weak, the story is silly, the plot is wanting, the arguments are absurd, and each one of the characters is more impossible than the last. Mr. Collins is well fitted as a special pleader in one way. It is easy to talk on almost any subject if one be not hampered by information. Finally, we repeat it as our belief, and we think it is that of an enormous majority of the medical profession, that scarcely ever has a decided advance been made in medical practice, in surgery, in physiology, in pathology, or in therapeutics which has not either directly proceeded from, or been greatly aided by, experiments on animals.

Much, moreover, as this mode of research has increased our knowledge of curative medicine, still more vast seems the less-explored field which is daily spreading further, for the investigation of what we may do in *preventive* medicine. Naturally it is a matter in which we cannot balance accurately the accounts or formulate the good done, and say, "so much pain inflicted on rabbits = minus;—so much good done mankind = plus." Preventive medicine owes its existence and all its progress to such experiments. We are but just beginning its study, and endless possibilities of good open before us. To make these possibilities probabilities, and these probbilities finally certainties there are are but two ways: one is by the commercial form of experiment on man, which has been tried and found very fatal, many hundreds of years now; the other is by a dozen or so of carefully planned and watched experiments on a few rabbits or guinea-pigs, and then the application of the knowledge thus gained. Let the zoöphilists say, if they dare, they consider the commercial experiment on thousands of men justifiable, and the scientific one on a few rabbits unjustifiable. We shall continue to prefer the latter, and so will every reasoning mind.

SOCIETY PROCEEDINGS.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, December 4, 1883.

THE PRESIDENT, DR. WILLIAM J. MORTON, IN THE CHAIR.

DR. GEORGE W. JACOBY read a paper upon

NEUROTIC AFFECTIONS ACCOMPANYING JOINT LESIONS.

The history of the subject goes back as far as Hippocrates, by whom it is mentioned. John Hunter was the next to take any note of it, and it is with him that originated the sympathetic theory. Malgaigne, 1826, and within the last ten years, Weir Mitchell, Duchenne, Verneuil, Sir James Paget, and Charcot and his pupils, comprise the list of names that have cast light upon the subject. The experiments of Valtat show conclusively that as a result of injury to the articular, or even to the periarticular tissues, produced by irritant injections, the muscles of the entire limb, but more particularly of the extensors of the joint, become atrophied. The result of the experiment given in the paper, as shown by the autopsy, is that the extremity which was experimented upon lost eighty grammes in weight in twelve days, and that each and every muscle separately weighed less than its corresponding fellow of the left side.

The affections which most frequently follow joint disorders, are paralysis and atrophy of the muscles, and hyperplasia of the subcutaneous connective tissues. More uncommon are anæsthesia, hyperæsthesia, analgesia, hyperalgesia, and neuralgia.

Three groups of nerve functions are implicated, motility, sensation, and nutrition. The symptoms are, after the joint lesion, changes in the appearance of the limb. The extensor muscles are generally involved.

There is a change in the electrical reaction of the muscles, their contractile power is diminished and finally lost. There is no reaction of nerve degeneration, no reversion of the normal contraction formula. This is also most noticeable in the extensors. The paralysis may appear as early as twenty-four hours after the accident—may also appear very late. The hypertrophy

of subcutaneous connective tissue seems to stand in a direct ratio to the atrophy of muscular substance. The atrophy is ascending and progressive; contracture is rare. The disorders of sensation are early symptoms, and differential diagnosis between these affections and progressive muscular atrophy may become difficult.

The conclusions which I am entitled to draw from the notes of thirty cases are: First, that in all cases, except those involving the ankle- or wrist-joint, the muscles affected were the extensors of the diseased articulation. Second, that in those cases which involve the ankle- or wrist-joint, the affection is descending instead of ascending, and that the extensors are not affected to any greater extent than the other muscles. Third, that in cases of arthritis of any of the joints of the fingers, the interossei muscles suffered first and most.

The cases which present particular interest are the following.

Case I.—Mrs. L., aged twenty-four. While walking, slipped and fell, striking her right knee. The joint rapidly increased in size, and was very painful. The following day it was very much enlarged, the patella pushed forward, and fluctuation was distinctly noticeable. The joint affection improved rapidly, but upon the seventh day a distinct paralysis was noticeable. The movement of flexion of the leg upon the thigh was easily executed, but that of extension was performed with great difficulty. Patient could only by the strongest effort produce any contraction of the triceps cruris. As the effusion became absorbed, the paralysis increased, and at the end of three weeks it was impossible for her to extend the leg at all. Atrophy was now well marked, showing a difference of three centimetres in favor of the healthy limb. The gluteal muscles were also involved. The electro-contractility of the muscles was decreased to both currents.

Case II.—This case shows how soon after the injury paralysis and atrophy may ensue. Patient, a laborer, aged thirty-four, was struck upon the left knee, on a Friday afternoon. He applied ice to the joint; the swelling went down. I saw him upon the following Monday, seventy-two hours after the injury, and then a distinct paralysis of the triceps cruris was noticeable, and atrophy was distinguishable upon the following Friday.

Case III.—By this case may be seen how entirely disproportionate the effect may be to the cause. Patient, L. H., merchant, aged thirty. While walking, his left ankle-joint turned, the outer margin resting upon the ground. Notwithstanding severe pain, he continued his walk; used the joint for several hours. When he examined his foot he did not notice any change in the appearance, but it was painful on pressure. After two months, he noticed a slight weakness in the injured leg, which was particularly observable upon going down stairs. Four months after the accident I saw him. His condition was then as follows: His foot hangs with the toes pointing downward, and cannot be brought to a right angle with the leg. He walks upon his toes, and does not bring his heel to the ground. The toes may be easily raised, but they fall back again by their own weight. The interossei of the foot are atrophied. The peroneal muscles, the muscles of the thigh, are also involved. The gluteus maximus is evidently considerably atrophied, for a large depression takes the place of its former prominence. Added to this, severe neuralgia of the sciatic and peroneal nerves rendered a condition almost unendurable.

The pathogenesis of the affection is still a disputed one. The sympathetic theory of Hunter; the pressure theory of various writers; the theory of functional inertia; then that of Vulpian, which is reflex; and finally those of Decosse and Charcot, are all incapable of satisfactorily explaining all of the cases.

The treatment, in order to be successful, must be varied, and adapted to each special case. The chief agents at our disposal are electricity, massage, mechanotherapy, and hydrotherapy in the form of hot and cold douches. Massage, in very many cases, seems to deserve preference to the electrical currents. The effects producible by massage are: (1) The diffusion of any articular effusion. (2) The comminution of vegetation. (3) The loosening and destruction of adhesion. (4) Increase of circulation. (5) Stimulation of muscular fibres.

In fact, all the agents above mentioned seem to act similarly by stimulating the nutrition of the affected muscles, by increasing the flow of blood to the parts and perhaps thus causing a reflex excitability of the motor tracts.

DR. CHARLES FAYETTE TAYLOR said: This is a subject with which I have considerable familiarity, as all persons who are extensively engaged in the treatment of joint affections must have, but it is too large even to touch upon, in many of its aspects, in the limited time at my disposal to-night, even if I had prepared myself for such a discussion by having previous intimation of the direction it would take. I should prefer to have the subject arranged before speaking of it, especially as I shall be obliged to differ from the essayist, both as to the pathology and treatment of the neurotic disturbances attending or following joint diseases of the character which he has set forth in the paper. In regard to the pathogenesis, I do not think it is necessary to adopt any peculiar theory, or to assume that even any special deviation from the ordinary course of nerve function takes place, in order to account for all the facts observed in these cases. The difference is one of degree only. A person is attacked with inflammation of the knee-joint, for instance. This is rapidly followed by diminished size of the muscles controlling the action of that joint, with diminished and sometimes even with entire loss of muscular action. But loss of muscular action is by no means evidence of loss of muscular power. The nerve-centres are unquestionably affected; but, most of all, the cerebral nerve-centres are the seat of the greatest disturbance. No theory can be adequate which leaves the cerebral nerve-centres out of the account, and the consequent mental element which plays, in my opinion, so important a part in these cases. The simple loss of muscular action, consequent on an attack of inflammation of the knee-joint, is sufficient to account for an immediate diminution of the size of the muscles whose freedom is curtailed. This is the certain result from mechanical restraint alone. But if, besides the mechanical restraint of position or retaining apparatus, there is added the mental restraint of fear, the difference in the rate and amount of muscular atrophy is enormously increased. Mental restraint acts similarly to an Esmarch's bandage; it squeezes the very life out of a muscle. As a very simple proof of the remarkable effect of mental restraint in causing muscular atrophy,

let me mention those frequent instances accompanying disease of the hip-joint. These cases often apply with limbs attenuated to the last degree. That a large portion of the muscular attenuation, accompanying somewhat long-standing hip-joint disease, is due to the mental restraint of motion, which might cause suffering, is proved by the fact that the application of proper mechanical protection, by which the mind is relieved of the fear of pain, is followed by immediate increase of muscular growth. This is so common and well known a fact that advantage is constantly taken of it, in the management of cases. My observation of the effects, on the muscles, of joint diseases must amount to some thousands of cases, and I never saw a case of atrophy which, in my opinion, could not be perfectly explained by non-use and mental restraint.

In regard to the therapeutics of muscular atrophy and loss of action following joint disease, I fear I must differ from the essayist quite as widely as in its pathogenesis. So far as the muscular wasting has been caused by non-use during the progress of the arthritis, it is sufficient to set them to work again after the inflammation has subsided. And I may say, in passing, that muscles stubbornly refuse to act, or, if forced to act, they as stubbornly refuse to develop during the progress of an arthritis. You must wait until the joint is well before you can expect the muscles to act readily enough, after there is no longer any joint affection, except for the restraint which is often maintained for a long time by mental impressions formed during the progress of the arthritis. It is astonishing to notice how deep and lasting the impressions made on the cerebral nerve-centres may sometimes be. Whatever the treatment adopted, I do not believe it can be of any direct service as long as there continues a mental restraint over the muscles, and it is equally true that whatever will remove such mental restraint will cure the atrophy. So important do we, in our practice, consider the mental influence over the muscles attending and following joint diseases, that we take special pains to get and to keep the direction of that influence for the very purpose of hastening the recovery of the muscular power after curing the joint disease. But the object of treatment should be to divert the mind from the affected member rather than to keep up attention to it by local treatment. It is true that massage will sometimes seem to do much good to the atrophied muscles; but this is apparent and indirect rather than real and direct. Massage has elements of mental diversion and control, which may be properly and usefully employed. But with a large experience in its use, I am free to say that I think it is very much over-estimated as a direct therapeutic agency. Its direct effect on the muscles is very slight, and what there is, is not exercise. Exercise involves nerve action as the initial force. Massage merely assumes to promote the forward displacement of a certain small portion of the tissue fluids. But such propulsion of the fluids contained in the soft parts, even if effected, is not exercise nor a rational substitute for exercise. Only by the legitimate use of the nerve-centres, especially of the cerebral nerve-centres, can there be any action deserving the name of exercise. To regulate such nerve-centre function when disturbed by the strong impressions made by joint inflammation, is the indication presented in the cases under discussion. In most cases time alone is sufficient. In others any means which effects a diversion of attention, whether done to the affected member or at a distance from it (which is the safer plan), will effect a cure. Incidentally, massage, electricity, the manipulations of the so-called "bone-setters," as well as the "animal magnetism" of the more arrant quacks, all appear to produce wonderful results in a certain number of cases. The results are real, but are not produced through any direct effect on the parts, but through the incidental impressions made on the cerebral nerve-centres—that is, on the mind. The worst of it is that in a large number of these cases direct treatment to the part affected by the mental restraint tends to increase the mental impression and to postpone indefinitely that unrestrained action of the muscles by which alone they can regain their power. The most difficult cases within my experience have been those who have had their attention to the affected member kept up by too much local treatment after the joint inflammation had passed away.

DR. L. WEBER had seen some cases of muscular atrophy following joint disease, and remembered one in particular which may be of interest to the Society.

Mr. J. W., age 32, merchant, of nervous temperament, but strong and active, made a tour through Switzerland in the summer of 1870. Being a good pedestrian, he travelled mostly on foot, but after a severe Alpine tramp in the upper Engadin, he was taken with synovitis of the right knee-joint. When the effusion had passed away, the extensor muscle above the knee had wasted considerably; the patient was unable to walk, and reached New York with difficulty. On examination, the joint was found to be in good order again, but the atrophy of the extensor muscle was still very marked, and the patient, by the support of a cane, walked, but not without difficulty. A four weeks' course of faradization made no appreciable change; and although he was assured that he would regain the use of his limb completely in the course of time, he was not satisfied, but grew despondent, and finally left for Europe to consult Prof. Erb. The latter told him the paralysis was not in his limb, but in his mind; that he should go about, and exercise, and live well, and he would soon regain the full use of his muscles. He followed the Doctor's advice, and returned to New York early in the spring of 1880 in perfect health. As to the pathogenesis of the disorder, the Doctor believed that the muscular paresis and atrophy in the case reported, and in others of a like manner, are of reflex origin, and that functional disturbances of motor centres in the brain, and not in the spine, are probably the cause of the trouble.

Of massage and its effect in such cases, as reported by the author of the paper, he had no personal experience, but had seen excellent results from its proper application in subacute joint diseases, muscular rheumatism, and bad sprains.

DR. E. C. WENDT said that the paper had brought out several points of interest, especially as regarded etiology, symptoms, and the hopefulness of treatment. He was sorry to find, however, that the reader had nothing new to offer in explanation of the pathogenesis of these conditions. Admitting the correctness of Sappey's views concerning the richness in nerves of the articular and periarticular tissues, it certainly seems thoroughly puzzling why acute polyarticular rheumatism

was not more frequently followed by just such accidents as Dr. Jacoby has described. Again, those more chronic joint manifestations dependent upon the gouty diathesis, where profound structural alterations were frequently observed, only quite exceptionally led to atrophy, paralysis, and to other neurotic disturbances alluded to.

Upon these points he was sorry to find that the paper under discussion left us as much in the dark, as we had been before.

With regard to massage, although his experience was limited, it was yet sufficient fully to convince him of its utility in certain cases. Of course there is massage and massage, but when properly and systematically applied, it is useless to dispute its beneficial action. The combined experience of a large number of competent men placed its usefulness beyond the pale of doubt.

DR. HEITZMAN said: When I was a student in Vienna, a girl, twenty-five years of age, fell down stairs and acquired serous gonitis, after which she was paralyzed and confined to her bed for five years. She was sent to a water-cure. A physician there urged her to walk, in order to enable him to judge of the degree of the disease, but she began crying, and said she was unable. She went home in despair; her sister asked her to make at least an effort to walk. After considerable urging she got out of bed and walked. This illustrates that mental influence has much to do with these affections.

I would call the attention of Dr. Jacoby to an article by Dr. Nicoladoni, published in 1871, in the *Wien. med. Jahrbücher*. I have seen his specimens with the nerves brought out by the use of chloride of gold, and from my observation I am convinced that these terminal nerve-fibres are not stable and unchangeable formations, but that, on the contrary, new nerve-fibres may form at any time of life from the living matter present in all tissues. I am thoroughly convinced that nerves may disappear and appear, according to certain physiological necessities, certain physical conditions of the body, such, for instance, as the result of exercise.

In an inflammation of a joint, the synovial and capsular wall being the seat of pathological changes of the breaking down of the tissue, certain nerve-fibres of the sensitive sphere will be within its range, and we should know that a certain number of them perish altogether.

Dr. Jacoby, to-night, did not give a theory of his own, but he quoted various authors. It certainly was the best plan for him to pursue, as so very little is known, even in our day, about nervous action. We know that by the inflammatory destruction of a number of sensitive nerve-fibres in the capsule of the joint, at once three spheres are involved: the motor, for there is paresis or paralysis; the sensory, for there is pain; and the vasomotor, or trophic, for there is emaciation. So far as my insight goes, I am convinced that the living matter in a vehicular arrangement produces the gray matter and all essential portions of nerves, including the axis-cylinder. This fact is thoroughly acknowledged by Prof. Stricker, at Vienna. There may be loss of living matter of certain nerves in consequence of inflammation and loss of contractil[illegible] with impaired conduction towards the centre. We then have comparative rest in a limited portion of the spinal cord, or even the brain, for the reticulum of living matter is set at rest for a time, without there being a material change in the living matter of the gray substance and ganglionic elements.

If massage will reëstablish the activity of muscles, we are prepared to understand that the field in the spinal cord, before out of action, may at once be brought in motion, and the motion communicated at once to the motor ganglia and all the sympathetic centres, which are situated along the spinal cord, as physiologists agree upon. The nervous action may for a certain time be impaired or dulled, because the reticulum of living matter is in comparative rest, lacking an impulse from without. So soon as such an impulse is carried to the resting portion, either by mental action, energetic will, or by mechanical shock, such as is done in massage, or in any other way, the contraction of the living reticulum is induced, and the normal condition reëstablished. Neither the assumption of centripetal neuritis nor the theory of reflex action can explain the phenomena observed after the inflammation of articulation and their sometimes speedy cure.

DR. HENRY LING TAYLOR said: I can contribute a case showing the beneficial effect of the use of the body-battery. A woman, under the care of Dr. J. West Roosevelt, at the Roosevelt Hospital Dispensary, of middle age and neurotic personal and family history, presented, among other symptoms, that of a prickling sensation down right arm and in right hand. There was no joint trouble. Dr. Roosevelt and I regarded it as one of the neurotic disturbances incident to a person of her temperament. The body-battery was tried for its psychical effect, and the woman returned in two days with the abnormal sensations gone. The symptoms had lasted a considerable time. The same treatment was applied to the hand without effect during the week, and she has since been under observation. I regard the result in this case as entirely due to mental influence.

Before concluding my remarks, I wish to speak of an interesting class of cases, alluded to by Dr. Gibney—the pseudarthroses. We have in these cases nearly or quite all the symptoms enumerated by Dr. Jacoby in his paper; atrophy, hyperæsthesia, or anæsthesia, etc., following mental restraint, there being no affections of the joints. I regard the trouble as functional, and seated mainly in the brain, and not in the spinal cord, as Dr. Gibney believes, if I understand him. Almost anything calculated to make a profound impression on the higher nerve-centres will often prove curative in these cases. This is, in my opinion, one of the most important effects of massage.

I have in mind three cases of ankle trouble following sprains, seen three to five months after injury. The acute symptoms had subsided; but pain, tenderness, and such impaired function as to cause limping persisted. These patients had been treated with supports, etc., for several months. Physical examination showed no local trouble not readily explained by mental inhibition. There had been recovery from the sprain without a corresponding readjustment of the nerve-centres to the new condition.

The patients were perfectly and rapidly cured by purely psychical treatment. I do do not doubt that massage often accomplishes the same result, through its psychical effects, in similar cases, but it is an empirical method as generally employed.

DR. GARRIGUES said: What little experience I have had with massage is in its favor, but that is almost

nothing compared with that of Dr. Taylor. Nevertheless, I have used massage for ten or twelve years. I became acquainted with it when it was quite new, and have found it most excellent for secondary conditions, and for treatment to which Dr. Jacoby alludes.

DR. MORTON said a few words upon the subject of the continuous body-battery and its use; the battery consists of a simple pair of elements. He recalled a case in which he used this with good effect. A gentleman came to him with chronic arthritis; associated with it was paralysis of the extensor group of muscles; the foot was dropped, and the toe dragged. He said no form of electricity that he had tried had done him any good. He gave him a battery which he could wear all the time, which consisted of pieces of silver and zinc, connected by copper wire. The zinc was shifted about upon different parts of the body; a constant current was kept up, which could be tested at any time with ordinary litmus paper. While under alkaline treatment the battery worked with better results, the excretions being saline. This battery is also useful in the treatment of chronic ulcers; the granulations formed will be found much more healthy. It is also beneficial in chronic eczema.

DR. GIBNEY said that at times it is very difficult to determine whether the atrophy precedes or follows joint disease. It is his opinion that it is more frequently the accompaniment of epiphysial disease than joint disease proper. And he wished to emphasize the fact—for a fact it was according to his observations—that the majority of grave lesions about joints in childhood was epiphysial; in other words, a chronic epiphysitis. Synovial disease he believed to be rare. If one examined a hip, for instance, said to be the subject of disease, marked atrophy is usually found in the thigh and calf muscles long before any pronounced joint symptoms are presented. The atrophy, he further stated, is confined to the muscles, and not to the bony tissue; for it is a rule that in chronic epiphysitis, about the knee for instance, that the epiphysis is actually elongated. He, in common with many other orthopædists, has long since regarded acute atrophy as one of the most constant signs of chronic articular ostitis; and he believed the atrophy to be purely reflex, and not the result of disease, or of the pressure from apparatus or bandages.

One argument brought against mechanical treatment, viz., that atrophy was produced, is fallacious. The clinical history of these bone lesions proves this conclusively. He was not sure whether chronic synovitis induced atrophy; but he was very positive in stating that in acute synovitis atrophy was rather the exception than the rule.

A class of cases presented certain neuroses which were very valuable in excluding bone or joint disease. These are known as spinal pseudo-arthropthy; and known furthermore as neurosis of the joint, neuro-mimesis, hysterical joints, Brodie joints, etc. The neuroses referred to were neuralgia, hyperæsthesia, and anæsthesia, but rarely any atrophy. He believed that they had their origin in the spinal cord and in the meninges; and the readiness with which they responded to spinal treatment confirmed him in his belief. Furthermore, the neuralgia of chronic ostitis of the hip is well known, and the knee-branch of the obturator nerve is affected early, and often very late, in the disease; although this is denied by some writers, and especially a recent writer, Dr. Clippingdale.

In some of the most advanced cases of caries of the hip, this obturator neuralgia is very distressing. Very frequently the sciatic nerve is involved, and in some cases, one especially narrated in a young lady with old disease at the hip, the sciatica was most distressing and yielded very poorly to drugs and electricity. The question of paralysis and degenerative nerve changes being sequences of chronic arthritis was one of which he did did not feel fully convinced.

He referred to a case of chronic arthritis of the knee, in an old woman who had paralysis of most of the muscles of the thigh and leg, and it was thought by some who saw the case that the paralysis was dependent on the joint lesions, but the proof was not by any means conclusive.

DR. JACOBY, in concluding the discussion, said: The first point to which I desire to reply is that brought forward by Dr. Taylor. He said that he believed these nervous changes, particularly the paralysis and atrophy, were produced by psychical or mental influence, and that they might be relieved by attention to this point. I am at considerable variance with him as regards the effect that mental influence has in the production of these disturbances. I, for my part, cannot understand how mental uneasiness can produce an atrophy, which is easily diagnosed by the tape, of a certain muscle, and that in the short time of three days. But, as the Doctor has promised us a paper upon this subject, perhaps that will succeed in convincing me.

As regards the opposition which the massage treatment has received, I expected it would receive more. Massage has, especially in the United States, been very much in the hands of non-professional men, and consequently has been greatly abused and misapplied. But I hardly think there can be any question as to its efficacy in suitable cases, when properly applied.

The theory advanced by Dr. Heitzman, is very similar to that of Prof. Charcot, who, as I mentioned in the paper, believes that certain parts of the cord are in a state of inertia or stupor.

COLLEGE OF PHYSICIANS OF PHILADELPHIA

Stated Meeting, December 5, 1883.

THE PRESIDENT, ALFRED STILLE, M.D., IN THE CHAIR.

DR. JOHN H. PACKARD presented the following report of a

CASE OF ABDOMINAL TUMOR, SOMEWHAT RESEMBLING PREGNANCY, IN A YOUNG MARRIED WOMAN.

Mrs. G., æt. 21, a very delicate-looking woman, consulted him July 21st in regard to a slight and uniform abdominal enlargement, which had been first noticed by her shortly after her marriage, about three months previously, and had been gradually and steadily increasing. She menstruated regularly every month, and had had no nausea. Neither the breasts nor the nipples showed any change from the virgin state. There was no tenderness at any point in the abdomen, and the appearance and feel of the swelling were very much such as would be presented in the early stages of pregnancy. The os uteri was soft, and the cervix was of some length

but there was a bulging above, as if the uterus contained a mass partly solid and partly liquid. He did not think it right to introduce a sound, as, in spite of the absence of rational signs, the presumption seemed to be in favor of pregnancy. Against this one fact seemed to militate, viz., that she rather lost than gained flesh. I declined to express any opinion as to the character of the swelling, but told the husband that my hope was that the case would prove to be one of pregnancy, as it was likely otherwise to be very grave.

The swelling continued to progress steadily, and on Sept. 13th she presented the appearance of being at about the middle of the fifth month of gestation. The hypogastric pain troubled her greatly, and was only allayed for a very short time after each application of chloroform liniment.

Dr. Ellwood Wilson saw her in consultation on Sept. 15th. In the forty-eight hours between the previous visit and this one, a very marked change had taken place. The abdomen had become greatly enlarged, its walls forming one curve from the ensiform cartilage to the pubes; there was very decided fluctuation, and percussion showed an area of dulness which was attributed by Dr. Wilson to the existence of a cystic tumor connected either with the Fallopian tube, or with the broad ligament. A sound was introduced into the uterus, the cavity of which was found to be unoccupied. On the 17th, more than a gallon of ropy, yellow liquid, somewhat deeply tinged with blood, was removed by aspiration; the flow then ceased, and the end of the canula encountered a solid substance, apparently a septum of considerable thickness. Upon the withdrawal of the instrument, a fresh flow took place, the liquid spouting out from the orifice to a distance of several inches. When this subsided, the abdomen, which was much less tense, was covered with raw cotton, and a bandage carefully and firmly applied.

In the evening the temperature rose to 103.5°, but before morning it fell to about 100°. The wound in the morning was found closed. The following evening the temperature again rose to 103.5°, but subsided again before morning, and was not thereafter above 99°. Yet her condition was unsatisfactory; her face was much pinched and anxious; she had very little appetite; at times her mind wandered slightly, and she slept but little. Vomiting occurred frequently, and she was seldom free from nausea. Her bowels acted regularly; her urine was free, and normal in every respect. Her pulse varied, but was generally from 110 to 120.

A portion of the liquid was submitted to Dr. H. F. Formad for examination, and his report, which was not received until some time after the case had terminated, was: "I think it very doubtful that it comes from an ovarian cyst, the fluid showing very little epithelium, and very few of the ovarian cells of Drysdale."

Sept. 23d her condition was very much more favorable; her mind was composed and even cheerful, her pulse and temperature good. Some food had been taken and retained.

On the 24th her state was much the same, and it was thought proper to entertain the idea of an operation for the removal of the supposed ovarian tumor. In the afternoon, Dr. Agnew saw her with Dr. Wilson and myself, and it was decided that the attempt should be made on the following day.

Accordingly, on the 25th, the abdomen was opened by an incision in the median line. After dividing the wall Dr. Packard came to what seemed to be a cyst, and passed in an ovariotomy trocar, when a very free evacuation of liquid, straw-colored and ropy, but clear, took place. It was now apparent that the liquid was contained in the peritoneal cavity, and that there was a large solid mass lying among the intestines. This tumor was soft and doughy, like a placenta; it seemed to belong to the mesentery, since although somewhat movable, it was firmly attached to the posterior wall of the abdomen, rather high up. The surface of the mass having been slightly lacerated, there was somewhat free bleeding, which was checked with some difficulty by ligation with carbolized catgut, and by the application of a cautery-iron. The wound was now closed with two large pins and a ligature cast around them, and with metallic sutures; a sheet of raw cotton was applied over the whole belly, and secured by a bandage. The patient rallied considerably, and after the effects of the ether had passed off, became quite sensible; but she soon began to sink, and died on the 27th, about forty-eight hours after the operation.

No autopsy could be obtained, so that the exact nature and connections of the tumor must remain matters of conjecture.

The notable points in the case now detailed seem to be the occurrence of a solid tumor, probably of malignant character, and apparently connected with the mesentery, in a young woman recently married; its resemblance in its physical appearances to the pregnant womb; the very sudden change that took place by a fresh effusion into the peritoneal cavity, and the obscurity which even then existed as to the real nature of the case. Even with the most accurate diagnosis, effective treatment would have been out of the question, and Dr. Packard cannot but think that his suspicion of pregnancy, erroneous as it proved to be, really prolonged the patient's life, which would have been almost necessarily sacrificed by earlier interference.

RHODE ISLAND MEDICAL SOCIETY.

Semi-annual Meeting held at Providence, Dec. 20, 1883.

THE Society met at 10 A.M. THE PRESIDENT, DR. JOB. KENYON, in the Chair.

DR. S. S. KEENE reported for the

BOARD OF CENSORS,

that Clarence Miles Godding, M.D., and Philip K. Taylor, M.D., having passed a satisfactory examination, were recommended for Fellowship. The two applicants were subsequently elected by unanimous votes.

The report of the committee on the subject of

ABOLISHING THE CORONER LAW

in Rhode Island, and substituting for it the office of medical examiner, was presented by DR. LLOYD MORTON, of Pawtucket.

The Committee recommended that another committee be appointed to see that the draft of a law, which the committee offered, is properly presented to the general Assembly at its coming session, and to adopt such

measures as may seem judicious and necessary to secure its passage.

The bill, as framed, provides that the Governor appoint in all twenty-two *medical men*, to serve as medical examiners in the respective districts into which the State is to be divided for this purpose. The term of service to be six years, unless removed for cause. A bond of two thousand dollars to be required. The fee for viewing a body is four dollars; for the same with autopsy, thirty dollars. Travelling fees, to go and return, at the rate of thirty cents a mile. Examinations to be made of such deaths as are suspected to be due to violence or crime. If, in the opinion of the medical examiner, death resulted from natural causes, the body is to be simply delivered to the friends for burial; but if a crime has been committed, the case then goes into the charge of the judiciary. In the many sections of the draft, careful provision is made relative to the matter of autopsies, chemical analysis, the subpœna of witnesses, etc.

DR. ARIEL BALLOU made a few explanatory remarks, after which it was voted to accept the report of the committee.

DR. MORTON explained further that by the new draft the medical examiner would have no *legal* authority whatever.

DR. BALLOU expressed his belief that the old English coroner law was the best; but owing to the poor quality of men now serving as coroners, we have been mortified at its working at the present time. Men are needed who are conversant with criminal law and able to ferret out the perpetrators of crime. The draft of a law now submitted separates the medical from the judiciary part of the investigation, the function of the medical examiner being simply to develop the evidence.

It was then voted to add the name of the President, Dr. Kenyon, to the committee already constitued, and that, thus augmented, the same committee be empowered to present the draft before the general Assembly.

DR. D. H. BATCHELDER then read a long paper on the

PATHOLOGY AND TREATMENT OF INFLAMMATION.

He thought the real, primary *cause* of the phenomenon called inflammation was as yet unknown. Also that in case of active inflammation of the brain, heart, or lungs, venesection was the most rational and best treatment. He cited one case in point: he was called in consultation to see a man suffering intensely from acute, primary carditis. The patient's agony was extreme, and had been for hours. The attending physician had tried all the reputed cardiac sedatives and innumerable external applications, with no avail, and death seemed imminent. Dr. Batchelder advised venesection, and at once took ℥xxx of blood from the man's arm. No relief followed for half an hour, when he took ℥xx more; still no relief; and he bled him again to the extent of ℥xl, when the patient looked up and said he felt better. In all, ninety ounces of blood were taken. The man recovered.

DR. H. TERRY reported

A CASE OF TUBAL PREGNANCY

that occurred in the practice of Dr. A. D. Weeks, of Providence.

The woman, aged thirty-two years, had been married two years. She had one child eleven months ago, the labor then being an unusually easy one.

Believing herself to be two months pregnant for the second time, and in good condition, so far as she knew, she was seized at four P.M. with dull pain in the *right* ovarian region, with vomiting and faintness, which lasted half an hour. The dull pain continued, but she was about the house until seven P.M., when she fell into a state of collapse, with imperceptible pulse, shallow respiration, but clear intellect, which continued until death took place at eleven P.M. An autopsy found the abdominal cavity filled with partially clotted blood, the right Fallopian tube ruptured, and the fœtal head engaged in the torn orifice, of which the margins were very thin. Chorionic villi and a partially developed placenta were found in the uterine cavity. Only *one* corpus luteum was found, and that was in the *left* ovary.

On being asked to explain the presence of a single corpus luteum in the *left* ovary, whereas the fœtus had developed on the opposite side, Dr. Terry replied that one of three things *must* be true—either (1) the fimbriæ of the right Fallopian tube grasped an ovum from the *left* ovary, or (2) an ovum from that ovary crossed over to the *right* Fallopian tube, or else (3) the established theory regarding the connection between ovulation and impregnation must be incorrect.

ANEURISM OF THE THORACIC AORTA.

DR. CHARLES O'LEARY reported the case of a man, thirty-four years old, who died on the 14th inst. About four years ago he began to complain of severe pain in his back, and this symptom continued up to the time of his death. Last summer strong pulsation was discovered in the left lumbar region, but no bruit was audible. The man was examined by Dr. Alonzo Clark, of New York, who made no positive diagnosis, but was of the opinion that the pulsation was due to the cardiac impulse being transmitted through some solid medium, the nature of which was undetermined. Several other physicians concurred in this opinion. At times the patient suffered agonizing pain, requiring the use of large amounts of morphia hypodermically. Four days before his death he began to have pain in the left knee and along the course of the sciatic nerve. His death was finally caused by a convulsion. An autopsy revealed an aneurismal sac, branching off from the left side of the thoracic aorta just above the diaphragm and extending down along the course of the psoas muscle to the lower lumbar region. This sac was full of clotted blood, and had caused almost complete atrophy of the psoas muscle, and extensive erosion of the eleventh and twelfth dorsal and first, second, and third lumbar vertebræ.

THE LIBRARY.

DR. G. W. PORTER announced that arrangements would soon be completed for keeping the Medical Library open from 2 to 6 P.M., in addition to the plan now in vogue of a single hour from 12 to 1 P.M. Also that a telephone had been placed in the library.

The Chair then named the following

DELEGATES

to the meetings of other State medical societies:

Massachusetts.—Drs. Brown and Ham.

Connecticut.—Drs. F. B. Smith and Levarts.

New Hampshire.—Drs. Fisher and Ballou.
Vermont.—Drs. Leonard and Luew.
New York.—Drs. Baker and Caswell.
Maine.—Drs. Porter and D. O. King.

The President then invited the Fellows to a lunch at Ardoene's. Adjourned.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, December 14, 1883.

THE PRESIDENT, DR. T. A. RODGER, IN THE CHAIR.

SYPHILITIC CARIES OF INNER TABLE OF SKULL; GREAT THICKENING OF CALVARIA; COMPRESSION AND DEFORMITY OF THE BRAIN.

DR. OSLER exhibited the skull-cap and brain. The patient, a woman, aged thirty-five, had died in the General Hospital, under the care of Dr. Godfrey. She had been an inmate of the institution many times during the past six years, with various manifestations of syphilis: had extensive necrosis of right tibia, and for fully two years had had a small open sore on right parietal bone. In November she was admitted with severe headache and debility. The headaches had troubled her for some years, were nocturnal, but latterly constant, and chiefly on the right side. There was a discharge from the sore over the parietal bone, and a probe could be passed through a small sinus which led beneath the dura mater. There was abundant highly albuminous urine, and amyloid disease of the kidneys was suspected. She was rather a dull, stupid woman, but during her last stay in hospital the intellect was clear, and there was no motor disturbance. A few days before her death the nurse noticed her to be unusually dull, yet irritable when spoken to. The right tibia had healed with extensive hyperostosis and deformity.

The external surface of the skull-cap was smooth, and on the right side, close to the coronal suture, there was a small sinus through which a Bowman's probe could be passed. On removing the calvaria, which was moderately thickened in the supra-orbital regions, a quantity of thick pus escaped. The dura mater was thickened, and strongly adherent posteriorly. The internal surface was smooth, and did not present any adhesions. As shown in the specimen, the disease is confined to the contiguous surfaces of skull and dura over the frontal and part of the parietal regions. The inner aspect of the bone in these parts is rough and carious, having an eroded, worm-eaten appearance, and covered in places with granulations; and towards the parietal bone, firm, solid fibrous masses unite it to the dura. The upper half of the frontal and the greater part of the parietal bones are thickened, measuring from two to three centimetres, and are exceedingly dense. The outer surface of the dura mater shows numerous soft granulations springing from solid fibrous tissue. The falx in its anterior half is thickened, and the longitudinal sinus is in this part obliterated. The brain showed no trace of coarse disease; the arachnoid was a little opaque, but the pia mater was normal. The hemispheres were curiously deformed from the pressure to which they had been subjected by the thickened bone and dura, and the pus between them. They are wedge-shaped; the base is at the occipital lobes, where the greatest vertical height is eight centimetres, and the apex is at the orbital margin of the frontal lobes, where the height is only two and a half centimetres. This curious deformity has been brought about slowly, and illustrates the degree of pressure to which the brain may be subjected, so long as it is applied gradually.

DR. HENRY HOWARD referred to the remarkable absence of cerebral symptoms in such extensive compression.

DR. OSLER also exhibited a skull, from the museum of McGill College, with syphilitic destruction of the entire right parietal and part of the frontal bones, with caries also of the inner table.

EPITHELIOMA OF TONGUE; EXCISION; ERYSIPELAS; CIRCUMSCRIBED GANGRENE OF LUNG; PERFORATION OF BRANCH OF PULMONARY ARTERY.

DR. SHEPHERD narrated the case and showed the specimen. The patient, aged forty-two, had had a portion of the tongue removed in May last for cancer, and was readmitted to the hospital early in November with recurrence in the stump and on the right tonsil and anterior pillar of fauces. On November 10, the entire organ was removed with the scissors, after ligation of the linguals. The affected tonsil and anterior pillar were also taken away. For five days the man did well; there was no fetor, and the wounds made for ligature of the linguals were healing, when, on the 15th, erysipelas appeared on the nose and spread rapidly over face, head, neck, and chest. Temperature 103° to 104°. Pulse 120. The mouth wound became sloughy. This condition persisted without special change until the 27th, when the breath became fetid and a cough developed with indications of septic trouble in the lungs. No rigors or sweats. From this time he became gradually weaker, and on December 2, died suddenly of profuse hemorrhage from the lungs. Dr. Shepherd referred to the advantage of previous ligation of the lingual in facilitating complete removal of the organ; with the scissors an almost bloodless dissection could be very readily made. At the autopsy the wound in the mouth looked in process of healing, and the cancerous masses had been entirely removed. The linguals presented thrombi at the site of ligature. There was a small pocket of pus beneath the left sterno-mastoid. The trachea and bronchi were filled with blood. The right lung presented four areas of circumscribed gangrene, the left two, each about the size of small apples. Placing the lung under water and blowing air through the pulmonary artery, bubbles escaped from one of the gangrenous regions close to the root of the lung. Dissection proved, as the specimen shows, that the hemorrhage came from a small branch of one of the main divisions of the artery, which had been opened in the necrotic process.

DR. ROBERT PALMER HOWARD spoke of the frequency with which gangrene of the lungs followed operations on the tongue and neck.

SARCOMA OF LUMBAR GLANDS; PERFORATION OF THE COLON; PERSISTENT HEMORRHAGE.

DR. SHEPHERD presented the specimen and gave the following notes: "Man, aged forty-five, large, strongly built, weighing over two hundred and fifty pounds, sent for him on July 23d, and stated that he had been seized in the night with severe pain in the back and abdomen.

The temperature was 103°, pulse 120; tongue coated; great tenderness of abdomen, with fulness in left iliac region; no vomiting; bowels had been opened several times in the night. In the evening he was worse. Temperature 104°; pulse 120; great abdominal distention with tenderness. On the 25th the temperature was normal, but the abdominal symptoms persisted, and there were diarrhœa and frequent vomiting. On the 29th he had a severe rigor, with temperature of 104°, and profuse sweating; tympanites and pain, with evidences of peritonitis. In a day or two he had another rigor, with severe vomiting and diarrhœa, and great abdominal distention. Dr. Ross saw the patient in consultation, and the conclusion arrived at was, that there was local suppuration deep in the iliac region. His condition at this time was very bad; pulse weak; vomiting incessant. With champagne and careful feeding the vomiting was checked, and he began to improve slowly, until in the early part of September he was able to move about the room. There was still fulness on deep pressure in the left iliac fossa, but the thick layer of fat prevented a satisfactory examination.

"About September 10th he began to pass a small quantity of blood—bright red—with the stools, and this increased until the daily amount was often as much as half a pint, and he became very anæmic. In the month of October he again took to bed; had severe rigors with high temperature and sweats, about every other day. At this time a tumor was made out in the hypogastric region, deep in the abdomen, fixed, solid, and not tender on pressure. Rectal examination negative. The loss of blood continued, and he got much weaker, and death took place on November 20th, after a profuse hemorrhage. The tumor had increased in size, and a week before death it seemed about the size of a child's head, and firmly fixed in the hypogastric region. The autopsy showed matting together of the coils of intestine with old peritoneal adhesions, particularly near the pelvis. The tumor was in front and a little to the left of the lumbar spine, and the sigmoid flexure was firmly united to it. The mass was readily turned out, and dissection revealed an extensive perforation of the bowel, as the specimen shows, and exposure of soft sloughing masses of the tumor. The wall of the colon was defective in an area two and a half by one and a half inches. The growth was a sarcoma of the retroperitoneal lymph glands. There were no secondary tumors, and nothing of note in the viscera. The persistent hemorrhage for over two months, had evidently come from the vessels of the exposed and sloughing part of the tumor. The repeated rigors were difficult of explanation; there evidently had been peritonitis, but whether local suppuration had occurred was not so clear, possibly it had in the process of perforation of the bowel."

DR. ROSS remarked that he had seen the case several times, and it had offered considerable difficulty in the way of diagnosis. The amount of abdominal fat prevented a satisfactory examination, and the fulness in the iliac region was thought to be possibly a focus of suppuration. Later on, when the hemorrhage occurred, and a more evident tumor could be felt, the diagnosis was made of malignant growth, and from the situation and size, probably retroperitoneal and involving the bowel.

SMALL TUMOR ON NERVE; INTENSE BRACHIAL NEURALGIA; REMOVAL, WITH CURE.

DR. SHEPHERD presented a microscopic section of a small tumor the size of a bean, which he had removed from a man's arm for painful neuralgia. The patient, a thin, nervous man, stoker by occupation, was admitted to hospital complaining of severe pain in the left arm—so bad that he could get but little rest at night. His appearance was that of a man suffering intensely. The pain was more severe at times, and was situated at the insertion of the deltoid, and from there ran down the back of the arm to the elbow. He also had numbness along the ulnar nerve. Just below the posterior fold of the axilla, internal to the brachial artery, a small nodule the size of a bean was felt, which on pressure caused agonizing pain. Dr. Bell admitted the case as one of neuroma. Dr. Shepherd had removed the growth, which was found connected with a small nerve, and closely united with the cellular tissue at the back of the artery. The man has had no pain since the removal, three days ago. The section of the tumor showed a fibrous capsule, and a small, angular-celled growth inside.

A report on the nature of the tumor was requested for the next meeting.

CORRESPONDENCE.

SUDDEN DEATH DURING OR SOON AFTER CONVALESCENCE FROM DIPHTHERIA.

To the Editor of THE MEDICAL NEWS.

SIR: I would be glad to add another case of sudden death during or soon after convalescence from diphtheria to those reported by Dr. J. Ferguson, of Toronto, Canada, in the issue of THE MEDICAL NEWS of December 15, 1883, page 649. The following case occurred in my practice in May, 1876.

F. B., a bright little boy of seven years of age, had, May 20, 1876, all the prodromal symptoms, which developed on the third day into an apparently mild type of scarlet fever. The fever was not high, the eruption comparatively light, and there was nothing manifested in the symptoms to indicate anything of a serious nature except the throat, which was intensely red and swollen, the tonsils and half arches so approximated as to shut out the view beyond, and here and there appeared specks of gray deposit of a suspicious character, and evidently portending danger.

The scarlatinal symptoms gradually subsided, but the throat symptoms increased in greater proportion. The entire throat, tonsils, fauces, soft palate, pharynx, and naso-pharynx, covered over rapidly with a thick, tenacious diphtheritic membrane, becoming quite offensive, and impeding respiration to such a degree as nearly to cause suffocation. It was only by the continued use of the probang, and an arrangement like a bottle-washer, a stiff spiral brush on a long wire handle—the brush being thrust in after opening the mouth and moved back and forth quickly as in cleansing the tube after operation for tracheotomy—that breathing could be kept up. The child soon became comatose, and continued in a drowsy condition most of the time, which aided the operation of cleansing the throat, and it was not until

the 6th of May, that any idea was entertained that he would survive, but to the surprise of all, he commenced to mend—the membrane began to disappear from the throat, allowing him to breathe through the mouth—that in the naso-pharynx remained longer, and obstructed nasal respiration for some time after.

As with most children during convalescence from protracted illness, he became very fretful and hard to manage, and further treatment, especially applications to the throat, was almost impossible, and had to be suspended for fear that, in his struggles, an accident might occur. He went on, however, seemingly well, until May the 11th; I visited him at 7 P.M. of that day as usual, and left him apparently doing well. In half an hour after I had seen him, I was apprised by a messenger that he sat up in bed to be fed, and while in the act suddenly fell back and expired.

I considered the remote cause of death in this case to be asthenia, and its immediate cause heart failure—failure to carry on its intrinsic work in the erect position. It is generally conceived that such cases terminate by death beginning at the heart, sometimes from paralysis, and sometimes by thrombus. I cannot say whether or not the emotional element had any immediate relation with the final termination in this case.

S. J. RADCLIFFE, M.D.
1211 F. STREET, N. W., WASHINGTON, D. C.

NEWS ITEMS.

AN INTERNATIONAL CONFERENCE.—In his annual report, Surgeon-General Wales recommends that the medical departments of the great naval powers be invited to a general conference, with a view to the adoption of a uniform nomenclature, classification, and tabulation of diseases, and of a system of interchange of periodical reports of the movement of disease, from which international reports of sanitary conditions all over the world may be published at stated intervals.

THE NEW SEWAGE SYSTEM OF BOSTON.—The great sewage system which has been in process of construction in Boston for several years is now completed, and last Tuesday its pumps were set in motion. This system, which constitutes one of the greatest engineering feats of the age, and is pronounced even superior to that of Paris, has for its object in brief, the interception of sewage as it flows in the existing sewers, and its conveyance to a point where it may be discharged with safety to the public health, and with the smallest possible injury to other interests.

For this purpose a large sewer has been built along the marginal streets of the city, intercepting all existing drainage by means of numerous branches, and finally terminating in a pumping station at Old Harbor Point. Here four engines, with a daily pumping capacity of 25,000,000 gallons, are erected together, with screens for the stopping of large objects. The outfall sewer, which extends thence to a reservoir on Moon Island, consists of three sections: first a tank, second a tunnel under Dorchester Bay, and third a large land sewer. At Moon Island, where the sewage is discharged into deep water, there is a large reservoir covering several acres. It has four compartments, and will hold nearly 25,000,000 gallons. Its design is such that it can be conveniently enlarged at any time to double this capacity to meet the needs of the increased growth of the city. A large number of gates are provided for admitting and discharging sewages, which are to be opened by hydraulic pressure, as are those at the pumping station.

The last link in the extensive chain of works is the outlet section, which contains four sewers, so arranged as to connect with the outfall sewer in receiving the discharge from the reservoirs and carrying it out to the tidal current at the end of Moon Island. The entire cost of this system has been $4,544,272.89.

ARCHIVES OF MEDICINE.—It is announced that the *Archives of Medicine* has discontinued publication after a satisfactory existence of five years. This suspension is rendered necessary not from lack of support by contributors or subscribers, but through a combination of extraneous circumstances.

NEW MEDICAL JOURNAL.—*The Archives of Pediatrics*, a monthly journal devoted to the diseases of infants and children, edited by DR. WILLIAM PERRY WATSON, of Jersey City, has recently issued its first number, containing sixty-four pages of reading matter. The collaborators number thirteen; of these, nine are selected from the principal medical centres of the United States, one from Canada, and three from England.

BANQUET TO CHARCOT.—The old pupils of M. Charcot tendered him a banquet on December 5, on the occasion of his nomination to the Institute. Congratulary telegrams were sent by those unable to attend.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending December 22, 1883, indicate that influenza, remittent fever, rheumatism, consumption, and bronchitis have increased, and that diarrhœa, pneumonia, measles, typhoid fever, inflammation of kidney, and scarlet fever, have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending December 22, and since, at eight places; scarlet fever at fourteen places; and measles at three places.

OBITUARY RECORD.—Died, in Washington, D. C., on Sunday December 30th, in the sixty-eighth year of his age, JOHNSON ELIOT, M.D.

From 1828 to 1839 Dr. Eliot was engaged in the drug business; in the latter year he began to study medicine under Dr. Thos. Sewall—being at the time Steward in the Naval Hospital. He matriculated at the College of Physicians and Surgeons of New York, and received his degree of Doctor in Medicine in 1842. Immediately upon his graduation he was appointed Demonstrator of Anatomy in the College, and in 1850 Professor of Anatomy in Georgetown University. In 1861 he accepted the Chair of Surgery in this institution, retaining it until 1876, when he was made Emeritus Professor of Surgery and Professor of Clinical Surgery. In 1869 he received from Georgetown University the honorary degree of A.M., and in 1872 that of Doctor of Pharmacy.

NOTES AND QUERIES.

A STATEMENT.

To the Editor of THE MEDICAL NEWS.

SIR: Will you kindly publish the following statement, made necessary because of my receiving letters from England and this country calling my attention to the liberty taken with my name.

Dr. H. H. Kane, of New York, has made use of my name in an advertisement of a secret means of treating the opium habit; and afterwards, in a pamphlet labelled "De Quincy Opium Home Cure," containing printed fac-similes of letters received by him years ago from a number of physicians, and among them a letter of mine. In obedience to a protest on my part, Dr. Kane has removed my name from his advertisement, and my letter from his pamphlet.

Yours truly,

S. WEIR MITCHELL, M.D.

December 22, 1883.

NERVOUS ACCIDENTS CAUSED BY THE MATERIALS OF PHOTOGRAPHY.

To the Editor of THE MEDICAL NEWS.

SIR: Permit me to direct your attention to the statement made in the article "Nervous Accidents Caused by the Materials of Photography," in your issue of December 15th, that the vapor of prussic acid is formed by "the decomposition of cyanide of potassium by bichromate of potassium."

It is well known that the vapor of prussic acid is given off by cyanide of potassium at ordinary temperatures even without the addition of an acid or acid salt. If these be added, the amount of vapor given off is, of course, increased; but in photographic operations, the two substances named are *never, under any circumstances, mixed together*, as might be inferred from the article.

Again, reference is made to the deoxygenation of the air of the operating room to an injurious extent by the affinity of the developing solution of pyrogallic acid mixed with an alkali (ammonia) for oxygen. This is absolutely impossible; the amounts used being so small that a lighted gas-burner (even if turned down low), or an assistant, would consume far more oxygen, and throw off perceptible quantities of carbonic acid. Sixteen grains of dry pyrogallic acid mixed with a drachm of strong ammonia would develop a plate much larger than the average of those used in photographic galleries, and although some oxygen is undoubtedly absorbed, it is not at all dangerous to health.

Thirdly, the mention of ether is made in connection with the gelatino-bromide process, so that it might reasonably be inferred by the non-photographic reader that the former played some part in the latter. This is plainly an oversight, the entire absence of any form of spirituous solvent being well known to all who are conversant with the said process.

Permit me to say, in conclusion, that I concur fully with the general idea expressed in the article as to the necessity of caution in the handling of dangerous chemicals, and the risk run by any one confining himself in the dimly lighted and close dark-room for too long a time.

Very respectfully yours,

ELLERSLIE WALLACE, JR., M.D.

1130 SPRUCE STREET, Dec. 20, 1883.

THE NATURE OF SYPHILIS.

To the Editor of THE MEDICAL NEWS.

SIR: In the review of the excellent work of Bumstead and Taylor on *Venereal Diseases*, fifth edition, in your issue of Dec. 22, 1883, the reviewer says, "In the chapter on the nature of syphilis, there is a somewhat indignant denial of the recently repeated claims of Dr. Otis, that Bumstead and Taylor have adopted his peculiar views as to the nature of the syphilitic virus, and the process of its absorption and distribution through the system."

This appears so much like a question of veracity between the surviving author and myself that I feel impelled to ask the privilege of a statement of my position in this matter in connection with this review. The "recently repeated claims" alluded to may be found in the preface of my book on *Genito-Urinary Diseases and Syphilis* (New York, 1883), page 7, as follows:

"The first authoritative publication which followed *practically* adopted and supported the new views, thus, 'The secretions of syphilitic lesions are found to consist of a serous fluid containing numerous granules or molecules, which are masses of protoplasm or germinal matter, holding the contagious properties of syphilis. *These microscopic bodies are probably taken into the circulation by the lymphatics and conveyed over the body.* . . . . In the secondary period of syphilis, these *cells* are very numerous, and the body may be covered with papules and tubercles *composed of them.* . . . As the disease wanes . . . the cells no longer have the tendency to reproduction which characterizes them in the early stages, but rather degenerate. *Hence we consider the blood and the secretions, in tertiary syphilis, innocuous.*'"

It is scarcely necessary for me to say that these views of the nature and behavior of syphilis, as embodied in the foregoing extract, are *identical* with those presented to the profession by me in 1868, and plainly set forth in my papers before the New York County Medical Society in 1870; also in my book on *Syphilis*, published in 1878, and later in my book on *Genito-Urinary Diseases and Syphilis*, published in 1883.

The denial referred to has not been accompanied by a withdrawal in the new edition (fifth) of the description of the nature of syphilis given at page 443 of the previous edition. It is true that these views are not distinctly credited to me, *as they should have been*, but occur in the body of the text as the views of the authors. In a note on the same page they even disclaim that my views are worthy of consideration.

The fact still remains that they are presented, as above stated, *as the views of Bumstead and Taylor*. Unless, therefore, it can be shown that the views above referred to are *not* those which I first published in 1870, and subsequently reiterated, it must be acknowledged that, by their publication in the work of Bumstead and Taylor, in form as previously stated, they in that way *practically* support my views, as I have claimed, however earnestly and persistently they may strive to ignore my connection with them.

Very truly yours,

F. N. OTIS, M.D.

THE "AMNIONTOME."

To the Editor of THE MEDICAL NEWS.

SIR: Under the head of "New Inventions," in your issue of December 8th, I find a description, and illustration by woodcut, of a new instrument, called by its inventor the "Amniontome." It is claimed by the inventor, also, that there has been a long-felt need in the armamentarium of the obstetrician of a contrivance whereby he could certainly and easily rupture the amniotic membranes when it was desirable to do so, and that now the vacuum had been filled. He states that the finger-nail sometimes fails, and that he has been obliged to resort to such awkward procedures as the introduction of knives and scissors to accomplish the desired end.

Truly, I should say that the introduction of knives and scissors for such purposes is a very awkward procedure, or, in fact, the introduction of any other sharp-pointed instrument for such purpose. Now, if I understand the nature of this "amniontome," it is a sharp-pointed instrument, arranged with a mechanism whereby it can be attached to either index-finger, while the puncturing or pointed portion extends beyond the finger's end a short distance. We are not informed of the length of the instrument; but this matters not. It is intended that this piece of insensible and pointed steel is to precede the sensitive and educated index-finger on its way into the vagina, and to the accomplishment of the desired end—the puncture of the amniotic membranes. I was taught, and have always practised, and believe it always should be practised—not to introduce *any* sharp instrument into the vagina unguided by the sense of sight or touch.

It is possible that this little "corn husker" may be introduced without puncturing any tissue not intended to be punctured; but the risk of so doing is always present before the operator. It violates the rule which I have just stated, and is, therefore, reprehensible. I should say that the introduction of a knife or a pair of scissors along the palmar surface of the already introduced index-finger is a far more rational procedure. In this case you know where your instrument is going, but in the other the instrument precedes the sensitive finger.

Let me state a more rational procedure than to use *any* sharp-pointed instrument; for such sharp instrument is not required to accomplish the end under discussion. Let us suppose that the obstetrician is sitting to the right of his patient, and, therefore, using his right index-finger for vaginal examinations, etc. Now introduce the right index until it comes in contact with the bulging and resistant membranes; then carry the ordinary grooved director of the pocket-case, held in the left hand, *over* the right thigh of patient, and introduce its blunt point along the palmar surface of the introduced finger until it also comes in contact with the sac of waters. When the next uterine contraction supervenes, by gentle pressure it readily penetrates the membranes, and the desired end is reached without the least particle of hazard to the mother's tissues Some other blunt instrument would answer as well as the director mentioned, but this is usually at hand. Sharp-pointed instruments are never required for this simple operation, and should not be used unless others are not at command, and then only when guided by the educated index.

Respectfully,

A. C. SIMONTON, M.D.

DES MOINES, IOWA.

THE MEDICAL NEWS.

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ORIGINAL LECTURES.

VAGINITIS AND VULVITIS.

A Clinical Lecture, delivered at the Long Island College Hospital.

BY ALEXANDER J. C. SKENE, M.D.,

PROFESSOR OF GYNECOLOGY AND SURGEON TO THE LONG ISLAND COLLEGE HOSPITAL.

(Reported by Edward Develin, M.D.)

GENTLEMEN: The first case to which I call your attention is one of vaginitis. This patient complains of a discharge from the genitals, and upon examination we find this discharge to be leucorrhœal in character. We also find a prolapsus of the anterior vaginal wall. The previous history of this case tells me that we have missed the opportunity of seeing its pathology when most marked. When she presented herself at the clinic a few weeks ago, she gave a history of acute vaginitis; she then had the profuse purulent discharge so characteristic of this disease. The fact that this was developed abruptly has its significance; bear that in mind, because in diagnosticating the cause of vaginitis we often have much difficulty. It is not easy to differentiate between an ordinary vaginitis which is caused by uterine disease, and the specific vaginitis which is of gonorrhœal origin. The most important point in the history that I know of, is in the difference of the onset of the attack. In the benign or non-specific variety, it comes on slowly, the patient usually having the history of some preëxisting uterine disease, and then by degrees the vaginitis is developed, slight at first, and gradually growing worse; whereas the specific vaginitis is developed promptly, and is more likely to begin at the introitus and extend upward—that which is consequent on uterine disease descends downward, and rarely involves the urethra and meatus. These points are important, and we should always bear them in mind, as it is impossible to differentiate by the mere physical signs. I have seen, especially among insane people, a vaginitis which I knew was not gonorrhœal, as there was no means by which the disease could be contracted, and yet it was extremely difficult to be sure that it was non-specific, and due only to some uterine disease or to the filthy habits of the patient herself. In these large asylums, it being almost impossible to keep the patients clean, so that a vaginitis once started is likely to become severe, I have seen vaginitis so marked that I could not distinguish its character by the physical appearances, and I was enabled to make the diagnosis only because I knew the patient could not have been exposed to the specific cause.

When a vaginitis begins abruptly; when it involves introitus, meatus, and urethra; and when you find that it does not extend the entire length of the vagina, you may take it for granted that it is specific—this is a strong evidence in its favor. Or if you have the good fortune, as I did the other day, *i. e.*, a gentlemen, whose wife was under my care, came to me and said, "Doctor, I am afraid you may find new developments in my wife's case, as I have exposed myself;" now when you have a history of that kind and which develops under your observation, then you know what it is.

In reference to our patient here it is a case of specific vaginitis, and Dr. Cushing, under whose care she has been, has almost relieved her of this difficulty.

As regards the treatment of this disease, it is simple and always satisfactory, if you adopt the best possible means of management. The great object is to keep the parts clean; the longer this purulent formation is allowed to remain in contact with the tissues the more it irritates and aggravates the disease. We could cure a vaginitis in a few days if we could keep the vagina perfectly clean.

In some neglected cases I adopt this plan, viz., separate the inflamed vaginal walls, and keep them apart by marine lint, so that the moment the purulent discharge is thrown out it is absorbed; it is simply a method of treatment according to the rules of antiseptic surgery, disinfecting the parts as the discharge forms. The douche, however, is very effectual. It prevents the accumulation of the discharge; if you allow the patient to lie on her back with the hips elevated, and then use the fountain syringe for half an hour four or five times a day, you will succeed in your treatment very well. It is not so much the preparation which you use, as the thoroughness of its application, and the care and frequency with which you use it; keep the surfaces of the mucous membranes perfectly clean, that is the great object.

I saw the other day, in one of the English journals, a mode of treating gonorrhœa in the male by just this method; using the return-current urethral douche, and then introducing a medicated bougie to keep the surfaces apart. The record of the length of time required to effect a cure in these cases was from three to ten days; and those who have had the treatment of such cases know that this record is most extraordinary. I saw at once that the surgeon secured his good results from this method of perfect cleanliness, and it confirmed my experience that this vaginitis can be cured in the same way.

Another point in the disease is that it is very liable to remain latent in some fold of the mucous membrane; generally behind the cervix the disease will lodge and linger. I learned a very important lesson when I first commenced the practice of gynecology. I had a case of vaginitis which I cured repeatedly, but she did not remain cured, and finally I sent her to the late Dr. J. Marion Sims; he wrote me a very kind letter, and told me that I had overlooked a little pocket where the disease lingered, and that from this point the disease again started. He told me to expose the parts with his speculum, and I would find this little pocket behind the cervix in the fold of the mucous membrane, and which I had failed to cleanse with my douche. I then carefully examined the patient, and found it as he described; then

carefully cleansing the parts I had no difficulty in effecting a permanent cure.

This trouble, when it involves the urethra, is liable to creep up into the two urethral glands which lie just within the meatus, and remain there; so that you may cure the vaginitis, and it will then start afresh from this source. After I had called attention to the anatomy and pathology of these glands, as secreting the gonorrhœal discharge, a physician in Illinois published two cases, those of husband and wife, which he had cured repeatedly of gonorrhœa, but the disease constantly returned. He then discovered the gonorrhœal inflammation of these glands; apparently to all external appearances the parts were looking well, but by pressure upon the urethra of the woman he could cause a little drop of matter to escape. He then laid the ducts open and was enabled to cure the disease.

If you will remember these two points, you will have no difficulty in treating vaginitis, and your patient will not return in a few days and inform you that your treatment has not effected a permanent cure.

Case II.—My next patient is a little girl, whom I understand is suffering from vulvitis or vaginitis. I have already presented such cases to you, and told you that this occurs in those children suffering from struma or ascarides, and sometimes in those who are tolerably healthy, who, running around until they become excessively warm, sit down upon a cold stone and take cold, getting up a little catarrhal inflammation of the vulva. Now here we have the physical signs in quite a marked degree of the ordinary catarrhal or purulent vulvitis which occurs in children. The outer parts of the vulva are covered with dried pus, while further in are little masses of muco-purulent material. This is just such a case as you will often meet with, and I desire you specially to notice the character of this discharge. This vulvitis is exceedingly annoying, and not uncommon, by any means; it is also very difficult to cure, unless you have great patience. They are extremely difficult to cure in case they are complicated with vaginitis. Now I presume, from my present examination, that there is only vulvitis; I will tell you why: because she has the characteristic discharge of vulvitis alone, that is, a muco-purulent discharge, somewhat tenacious—you observe how it hangs together. When vaginitis is present with the vulvitis, we get a milky discharge, very abundant. I have seen a little girl of this size who would saturate her garments with the discharge so that when they were dried they would be as stiff as if they had been starched. From the absence of this profuse milky discharge I am inclined to think that we have vulvitis alone, and no vaginitis. In vaginitis, even though the vaginal discharge be purulent, it remains fluid, not tenacious like that which comes from the vulva. You will usually be able to make your diagnosis by the character of the discharge.

This child is also suffering from otorrhea; and, more than that, she has a sister who suffers from this vulvitis; so I have no doubt in my mind, from the fact that both of them have it, that it is due to a scrofulous diathesis; for, as you are all aware, in that peculiar constitutional condition we are prone to have inflammations of the mucous membranes. They are the little ones who get up this inflammation of the eyes, this blennorrhœa at birth, and, if they escape that, they may have the condition which you see in this child.

In reference to the management of cases of blennorrhœa, the oculist will tell you that it is a matter of care and cleanliness. It is precisely the same in vulvitis and vaginitis; if you will only keep the parts clean, they will get well. This, however, is no easy matter when treating the poorer classes. The longer you permit this discharge to remain, so much the more will this inflammation be kept up. This little one should be bathed constantly, every two or three hours during the day; carefully wash the parts with a little borax and water, and then apply some dry powder; the one that I prefer is bismuth mixed with a little chalk, have it finely powdered and dust it on; iodoform also answers the same purpose, but the odor is not very pleasant. These applications have a soothing and quieting effect upon the mucous membranes, and keep the surfaces apart. This is a very important item in treatment, because two inflamed parts lying in apposition cause an internal irritation.

In vulvitis this is about all you will have to do locally. You must keep up persistent cleanliness, and also attend to the general health of your patients; build them up with good diet, cod-liver oil, iron, and so forth. If you do that, they will get well. But it is otherwise if you have vaginitis; you then have to use a vaginal douche, carrying it up carefully to the end of the vagina, and carefully wash the part with a solution of borax and water; afterwards washing it with a mild solution of zinc or hydrastis canadensis. These cases are extremely difficult to cure, because the mucous membrane of the vagina is full of deep rugosities, and the wash does not come in contact with all parts. You therefore require to distend the vagina as much as possible while using the local applications, but even then there may be little places where some of the discharge will remain, and by and by it will beget the old trouble anew. Some authors say that if you have tried all these means and failed, it is better to place the patient under an anæsthetic and then, distending the vagina, touch every part of the mucous membrane with a solution of nitrate of silver, and follow it up with a douche.

This is about the outline of the treatment required; eternal vigilance is the price you have to pay for success. Still more, you must superintend the treatment yourself, unless you have a very intelligent mother or nurse to carry out your instructions.

ORIGINAL ARTICLES.

THE EXPERT TESTIMONY IN THE DWIGHT INSURANCE CASE.

BY HORATIO C. WOOD, M.D., LL.D.,

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THE so-called Dwight case bids fair to become not only a landmark in the history of insurance law, but also a *cause célèbre* in the annals of medico-legal medicine. As one who had taken part in it, I had intended to say nothing about it; but some misconceptions as to the facts and certain reflections upon a body of physicians of more or less eminence, which have gained currency, have led

me to believe that the facts of the case ought to be known to the whole profession.

As the evidence elicited at the trial has not as yet been published, it can only be known to those who have heard it in its entirety or have access to one of the three extant copies of the stenographic notes. *Inside* the court-room the experts have been remarkably free from serious disagreement, because they were confined to the testimony; but *outside* the court-room the criticising expert has roamed at will through the realms of imagination and *ex-parte* testimony. *Inside* the court-room there was no evidence to show that overdoses of morphia were given, and no medical man there ventured to assert that Col. Dwight died from other cause than strangulation.

All medico-legal discussions of an individual case, if they are to lead to any proper result, must be based upon the facts sworn to at the trial; *i. e.*, upon the evidence on which an opinion had to be given at the time of the trial. Especially is this limitation necessary when experts are arraigned at the bar of public opinion.

The action of the experts in the present case has been open and honorable; but, as it has been publicly challenged, I propose to give, primarily, such history of it as will not appear in the account of the evidence.

About the first of June, 1883, I received a telegram from Prof. Austin Flint, Jr., requesting that Drs. Roberts Bartholow, Theodore G. Wormley, Isaac Ott, and I, should meet him the next day at my office. At the interview we were informed by Prof. Flint that he desired to see us concerning the Dwight case, as the lawyers and the Insurance Committee, believing that Col. Dwight had died of gelsemium poisoning, had requested him to procure a professional opinion from us upon evidence furnished in a privately printed book, copies of which he put in our hands. We were expressly told that these books were to be considered as confidential communications; that the matter contained in them was not legal evidence which had been sifted and could be relied on, but that it was a collected mass sufficient to indicate the probable drift of the evidence at the trial.

Dr. Flint remained only a few minutes, and did not in any way attempt to influence our decision. We separated, met by appointment twelve hours later, and found that we had separately reached the same conclusion, viz., that the death of Col. Dwight was probably caused by strangulation. Prof. Bartholow was most positive and outspoken in this opinion; Dr. Ott the least certain and positive; Dr. Wormley, whilst acquiescing in the opinion as a matter of belief, said that it was too much out of his line for him to give evidence. This conjoint opinion was given to the Insurance Companies with the reserved statement that we had no evidence that the heart had been properly examined, and that, therefore, there was that element of doubt. It was subsequently proved at the trial that microscopical examination of the heart had been made, although the report had not been furnished us.

In regard to the relations of the other experts. Prof. C. H. Porter, of the Albany Medical College, was originally employed by the Insurance Companies to visit Mr. Dwight in his lifetime. At the time of the first autopsy he was hastily summoned by telegraph to attend, and being unable to go, on the instant, selected Dr. John Swinburne as the best substitute he could procure. Dr. Swinburne's connection with the case was, therefore, accidental. He was not asked to go by the Insurance Companies, or their legal representatives, but by Dr. Porter, as a personal favor to himself. The testimony of Dr. Swinburne in the trial was not only in matters of opinion, but also in matters of fact. If the facts sworn to by Dr. Swinburne are as he alleges, I can but reiterate my opinion expressed upon the stand, that there is no room for doubt as to the cause of death.

As bearing upon this I may be allowed to quote the following passage from Taylor's *Principles and Practice of Medical Jurisprudence:*

> "The act of strangulation should be, medically speaking, as distinctly provable, without the production of a rope, as the act of stabbing without the production of a knife which inflicted the stab. If these principles are not adhered to in practice, policemen would be as competent as medical experts to give evidence of the causes of death in cases of alleged strangulation." (P. 65.)

Under these circumstances, it is proper to state that Dr. Swinburne has had a long, successful professional career, in which he has enjoyed very large opportunities for making observations upon all sorts of causes of death, and has been at various times engaged in medico-legal work. It seems to me absurd to question his ability to distinguish a rope-mark from a wrinkle. The lesions of the body were not such as to require great skill in their perception. They were simple and gross in character. It must also be remembered that, in almost all points, Dr. Swinburne's testimony has been corroborated by the notes of the autopsy, signed by fifteen physicians without comment; as well as by the appearances at the second autopsy. Drs. B. F. Sherman and E. H. Bridges, who attended the second autopsy, are men of high reputation in northern and western New York, and have had large experience in medico-legal practice.

The following history of the case is based exclusively upon the evidence given at the trial, and is believed to contain all the facts, of any importance to the medico-legal questions, which were proved at Norwich. The corrected evidence, which will be published as soon as possible, will certainly be accessible, so that any one may verify in all its details the story of which I am about to give the outline. In this history, I might, perhaps, have confined the attention exclusively to the medico-legal facts, but it has seemed to me that the reader would prefer to have the whole story in brief, as it is one of great psychological as well as of medico-legal interest.

Col. Dwight, after the War of the Rebellion, was occupied in business in northern Pennsylvania, and moved in 1872 to the city of Binghamton, New York, where he engaged in very large building speculations. During much of his life in Binghamton he was proprietor and manager of the Dwight

House. As he described himself, he was a man accustomed to "bore with a big auger." His business operations had always been on a grand scale, and largely based upon borrowed money. According to his own sworn statement, he had lived at the rate of eighteen thousand dollars a year, and had accumulated four hundred thousand dollars of debt, besides dissipating his wife's fortune, and rendering her insolvent to a large, if not almost an equal, amount. He finally was beset on all sides by creditors, members of his wife's family being among the most rapacious and exacting. In testimony given in 1878, during the bankruptcy proceedings which he had instituted for his relief, he swore as follows: "I received a notice that Dusenberry [who was his wife's uncle] was about to sell the equity interest in this estate, thereby sweeping the last plank from under me." Again, he says, "It was just like killing me, and I felt as though I was sold out by everybody and everything." At another time, in the same proceedings, he stated, under oath, that he had but eight dollars "on the face of the earth," and his wife but two dollars; and that he was borrowing money from his brother Ward to pay the bills for board of himself and wife at the Spaulding House.

Col. Dwight was not discharged from bankruptcy until November 6th, nine days before his death; but on the 31st day of July he began to apply for life insurance, and before the middle of September had made formal applications to thirty-one companies for a sum in the aggregate of three hundred and ninety thousand dollars, requiring annual premiums of about thirteen thousand dollars. Taking his application in the case immediately on trial, that of the Germania Life Insurance Company, as a type, Col. Dwight answered in it the following questions as follows:

1. In what occupation has he been engaged during the last ten years. *Ans.* Real estate and grain dealer.
2. Is he now, or has he been, engaged in or connected with the manufacture or sale of any beer, wine, or other intoxicating liquor? *Ans.* No.
3. Whether the party to be assured is now, or has been, insured in other companies; in which, and for what amount in each? *State exactly on what kind of policy. Ans.* Yes; New York Mutual, fifteen year endowment, ten thousand dollars; Connecticut Mutual, ordinary life, fifteen thousand dollars; Washington, ordinary life, ten thousand dollars; Equitable, ordinary life, ten thousand dollars.
4. Whether an assurance has been applied for with this or any other company without having led to an assurance; if so, with which companies; and for what reason did the application not lead to an assurance? *Ans.* No.
5. Has the party now, or has the same ever had, any of the following diseases: Spitting of blood, bronchitis, consumption, etc. *Ans.* No.

1. It was in evidence that Col. Dwight, during his bankruptcy proceedings in 1878, swore that his whole occupation from 1872 consisted in fighting his lawsuits and keeping the Dwight House.

2. It was proved, and not disputed, that he sold liquors during the whole period of time which he kept the Dwight House.

3. It was proved, and not disputed, that he never was insured in the New York Mutual Life, nor in the Connecticut Mutual Life.

4. It was proved, and not disputed, that he had made applications to the Phœnix Mutual Life Insurance Company and others, which had not led, and never did lead, to an assurance.

5. It was proved by several witnesses that he had, in March 1867, severe cough with repeated spitting of blood, amounting in at least one instance to a copious hemorrhage, and that he had repeatedly said that he had had hemorrhages from the lungs; also that he "expected the damned thing would carry him off." This testimony was not disputed by the plaintiff, who admitted the spitting of blood, but claimed that it was not a disease. At the apex of one lung, at the first autopsy, was found a "cicatrix," or "fibrous nodule," a lesion which was noted on the official notes subscribed to by the fifteen physicians present as being "probably the result of old pulmonary phthisis."

Col. Dwight warranted that his answers to the above questions were true, and the contract provided that if any of the answers in the application were in any respect untrue the policy should be null and void; so it is perhaps allowable to state that it is upon these questions and their false answers that the counsel of the Insurance Companies have always, and still do expect to win their case. They assert that the law in New York State requires the judge to decide upon the legal points, and not to allow a case to go to the jury when there is no conflict of testimony. They have always recognized the extreme difficulty in getting a jury to decide a life insurance case upon its merits. The medico-legal investigation was entered upon by the Insurance Companies against the advice of their counsel, who proposed, as above stated, to contest the case purely upon the ground of false answers; but the companies were not willing to win the case upon purely technical grounds. They urged that they were refusing payment because they believed that fraud had been perpetrated, and that there had been conspiracy to rob the funds which had been entrusted to their care; and that they wished the public to understand that their strenuous resistance was based upon moral grounds, and upon the belief that if this raid were successful others would follow.

The counsel for the defence were adverse to the theory of suicide by strangulation even after receiving the opinions of Drs. Swinburne, Sherman, Bridges, and others, and therefore sent copies of the autopsy to experts in New York and Philadelphia, in the hope of obtaining opinions that the death was caused by vegetable poisons, which Col. Dwight could have taken without the knowledge of any other person. When the opinion of the Philadelphia council of experts was given, they expressed great chagrin, stating that if Col. Dwight was murdered the policies would have to be paid, whilst the theory of assisted suicide involved the indirect trial of at least Mr. Charles A. Hull as an accomplice. They not only were very adverse to the theory as a troublesome one, but did

not believe it to be true; and I will not soon forget my own astonishment when, during the latter part of the trial, one of them said to me "You experts have finally convinced me that Col. Dwight was strangled."

To return from this digression to the story of the last months of Col. Dwight's life. By the 22d of September, 1878, he had been either accepted or rejected by every life insurance company in the country, excepting one in California, and had secured in all, policies of insurance representing two hundred and fifty-six thousand dollars, and requiring for their maintenance an aggregate annual payment of over eight thousand dollars. He was at this time in bankruptcy, living at his father-in-law's house, without profession or business, or any apparent source of income. There was no evidence to show that Col. Dwight had at this time any scheme or plan for large enterprise upon hand, unless it was, as claimed by the defence, that of defrauding the Insurance Companies. Whenever it was possible, Col. Dwight stipulated that the premiums should be paid quarterly, and, when the rules of the companies did not allow this, semi-annually. In this way the annual expense was increased about one thousand dollars, but the first payment was reduced to a minimum. The first quarter's premiums were all that were ever paid, and these were paid with borrowed money, the lenders becoming beneficiaries under the will, which was executed in September, 1878. Before all of the coveted policies were secured, several of the insurance companies discovered the falsifications in the applications, and became convinced of the fraudulent character of the transaction. The delivery of some policies already in the hands of the agents was stopped by telegraph; in other cases Col. Dwight persuaded the agent to send word to the company that the policies were already delivered and the premiums paid, when no delivery or payment had been made.

Whilst Col. Dwight was still in perfect health various companies sent to him accredited agents with the statement that as the policies had been obtained by fraud no more premiums would be received, and that in case of his death no insurance would be paid to his heirs, and offered to him in money the amount of premium already paid, at the same time demanding back the policies. The proffered return-premiums and the demanded surrender of the policies were alike refused. During the month of September and the first ten days of October, Col. Dwight spent most of his time in hunting in the neighborhood of Windsor, N. Y., over a country which is extremely hilly or semi-mountainous. About October 11th it was announced that he was unwell. News of his alleged illness reaching the insurance companies, their suspicions were aroused, and Dr. Charles H. Porter was sent to see him on November 6th.

To put in this article the details of the evidence given by the physicians who saw Col. Dwight during life, or after his death, would occupy more space than can be claimed. The statements of the medical gentlemen are embodied in the hypothetical questions, concerning the agreement of which with the evidence there was at the trial no dispute whatever, and it is believed that the physician reading this article can decide for himself and answer as though an expert at the trial. Suffice it then for the present to state that Dr. Porter found, after very careful examination, nothing abnormal with any of the organs of Col. Dwight, and obtained from Dwight's physician, in his presence, the history of an obscure illness in which the only objective symptoms had been some vomiting and some evidences of a paroxysm said to resemble an attack of pernicious fever, but which had lasted only a few minutes, and in which the temperature had not risen above or fallen below 98½°, and the pulse not above 80. Suspecting that Col. Dwight might be suffering from chronic arsenical poisoning, Dr. Porter asked for a specimen of his urine for chemical analysis, but was met with the reply that Fowler's solution was being administered, and that therefore arsenic would of necessity be in the urine.

The evidence for the defence gave no account of what transpired in the history of Col. Dwight between the 6th and 15th of November.

In order to obtain some information concerning the day of his death, Mrs. Owens, the sister of Mrs. Dwight, was placed upon the stand. According to her statement, the apartments occupied by Col. Dwight were in a semi-detached cottage, which formed a part of the Spaulding House, in Binghamton. They consisted of a sitting-room, entered directly from a corridor, and communicating with a bedroom which was furnished with one window opening upon the ground. In the sitting-room was an open fire or stove. The bed in the chamber had a high head-board of such a character that it would be easily possible for a man to hang himself whilst in bed.

During the day of November 15th, Col. Dwight was up, dressed, saw various persons in his sitting-room, executed legal papers in a clear, bold hand, was bathed, and had his beard cut by the barber. Between 8 and 9 o'clock P. M., Mr. Charles A. Hull came. About half-past nine Dr. Dan. S. Burr came in, chatted a few moments and then left. Mrs. Dwight and Mrs. Owens left the room a few minutes after the Doctor, Col. Dwight bidding them good-night. They retired to their room on the other side of the corridor, where they slept together. At about half past eleven, they were aroused by a rap upon the door. Mrs. Dwight instantly arose and went to her husband's room, Mrs. Owens following in two or three minutes. Mrs. Owens found in the room Mr. Hull, W. F. Spaulding (the proprietor of the hotel), and Mrs. Dwight. Mr. Dwight gave no sign of life after she entered. He was supported on pillows, and Mr. Spaulding was trying to give him brandy, but desisted in a few minutes, saying that he did not swallow it. At the suggestion of some one, hot water was obtained and Col. Dwight's hands put into it. Something over half an hour after Mrs. Owens went to the room the undertaker arrived. Mrs. Dwight and Mrs. Owens then went into another room and went to bed.

In order to complete the story at this point, it is necessary to draw on the evidence furnished by

Neri Pine, the attorney of Col. Dwight, who was put upon the stand by the plaintiff. He stated that on November 15th he called on Col. Dwight to transact certain legal business, and to inquire concerning the funds for the payment of the second quarter's premium which would be due on the 19th. Col. Dwight replied that he had no money to pay it, but that he (Mr. Pine) had better see Mr. Dusenberry, his father-in-law, whom he (Col. Dwight) thought would advance the necessary funds. Mr. Neri Pine further stated that Col. Dwight gave him no reason for supposing that any arrangement had been perfected with Mr. Dusenberry, but told him "that he was going to make arrangements with his father-in-law."

By the morning after this interview, death had rendered unnecessary any call by Mr. Neri Pine upon Mr. Dusenberry's good-nature.

The last will and testament of Col. Dwight is a remarkable instrument, which ought to be read in its entirety to be thoroughly appreciated, but of which we can only afford space for a very brief abstract. In it he states that his only assets are the moneys to be derived from the life insurance companies, and that he does not consider himself morally or otherwise required to pay anything to his creditors, from whom he escaped through his bankruptcy proceedings, but directs a number of small sums, from $1.60 upwards, to be paid to certain small creditors, who are specifically named.

He then bequeaths large sums of money to the Judge of the Supreme Court of his district, and to several of the most prominent lawyers of Binghamton, including the District Attorney. He leaves the sums of $10,000, $5000, and $1000, respectively, for the purpose of giving annual banquets to the poor of the town, the Fire Department, and the Press of the town; and to the Binghamton Library Association he bequeaths $7500. He makes a bequest to each of the four churches in Windsor, a village near Binghamton.

After a number of small private legacies, the bulk of the money to be derived from the Insurance Companies is directed to pass to his wife and son; but if the wife shall not have been released from bankruptcy, her share is to go to the son, in order to prevent its being used for the payment of debts.

It was testified to upon the stand that in the last weeks of his life, Col. Dwight had said that "he would rather be in hell than be poor:" that he was very poor and expected to die soon, is strongly indicated by the specific directions in his will to pay certain very small personal debts With a comfortable income, and no near prospect of death, a man would hardly provide in his will for payment of his last week's milk bill, or shoemaker's account. His frame of mind is further evinced by his statement in the will: "I have lived to that age, and been subject to such experience, that I have no further ambition for myself beyond leaving my family comfortable, and with sufficient means to enable them to live as they were in the habit of heretofore, and also in making such friendly bequests to those who are endeared to me from association and kindly acts, as will leave pleasant memories behind me when I start on the long journey."

Fifty-eight hours after death the first autopsy was made on the alleged body of Col. Dwight. The results obtained were testified to on the part of the defence by Dr. John Swinburne, and are embodied in the first hypothetical question herein presented. A second autopsy was made about five months after death in the presence of various physicians. The results obtained were testified to by Drs. Swinburne, Sherman, and Bridges, and are also embodied, so far as they are of any importance, in the hypothetical question.

Before taking up these questions it seems proper to give a little more in detail the evidence submitted by the defence in regard to two or three points.

As to the *condition of the heart.* Dr. Swinburne testified that the heart was perfectly healthy in every particular, except that some little thickening was noticed around the edges of the valves, and that at the second autopsy he carefully examined the coronary artery and found it entirely normal.

Dr. Sherman testified that, at the second autopsy, he found the heart remarkably firm, and in a good state of preservation; that he had prepared about one hundred and fifty slides of its walls for microscopical examination, and found in each the muscular fibre perfectly normal. He had with him in court a number of these specimens, and offered them for examination by any experts who might be called by the plaintiff, but no such examination was made.

Dr. Austin Flint, Jr., stated that he had examined a number of these slides, and found the heart-tissues normal. Dr. H. C. Wood confirmed this condition of the muscle-fibre in the slides which he had examined. Dr. E. H. Bridges testified that he had examined the heart both macroscopically and microscopically, and found it normal.[1]

When it is borne in mind that Mr. Dwight was an athletic man, in the prime of life, forty-one years of age; had spent the last months of his life hunting in a hilly country without suffering from shortness of breath or other distress; that the lesions in the body were entirely diverse from those found after death from heart-failure; that the heart had emptied itself of blood, and ceased its action in systole; that there was no evidence whatsoever at the trial in any way contradicting the statements made by Drs. Swinburne, Sherman, and Bridges; that the heart, carefully examined macroscopically, appeared to be perfectly normal; and the assertions of Drs. Sherman, Bridges, A. Flint, Jr., and H. C. Wood, that the fibres were shown by microscopical examination to have their striæ well marked, and to be entirely free from degeneration—it seems to me that the question as to the condition of the heart must be considered as settled. Certainly no

[1] The perfect condition of the heart at the second autopsy was largely due to the fact that, after the closure of the body at the first autopsy, the undertaker poured into the thoracic cavity a pint of concentrated solution of carbolic acid, arsenic, camphor, and corrosive sublimate.

opinion that death resulted from heart-failure could be given upon the evidence furnished at the trial.

In regard to the existence of *superficial emphysema of the lung* as present at the first autopsy, Dr. Swinburne testified minutely and positively, although from some oversight this testimony was not embodied in the hypothetical question as to the cause of death as given a little later. Such recent, fresh rupture of the upper air-vesicles is, in itself, almost sufficient to prove that a man has died from an obstruction to respiration in the throat. To rupture the air-vesicles there must be great internal pressure, as of forced respiration, and prevention of the escape of the air, which then tears open those vesicles whose walls are not closely supported by other vesicles, or by tightly contracting muscles.

In regard to the alleged *furrow in the neck*, Dr. Swinburne testified that it

"Was a heavy indentation in the neck, commencing on the right side near the hyoid bone, and extending upwards and backwards to within, perhaps, an inch or so, and perhaps less, of the centre of the posterior part of the neck; on the left side, the same indentation commenced about the upper part of the cricoid cartilage, extended about the same angle upwards and backwards until the indentations came within an inch and a half of meeting. These indentations were full three-eighths of an inch deep, so you could lay your finger right in them, and about that in width—I should say full that. At the bottom of the indentation, there was a peculiar appearance, sort of leathery appearance, or had a half-burnt or scorched appearance."

Dr. Swinburne further stated that at the second autopsy this indentation was "plainly perceptible," "and the same peculiar condition which appeared before at the bottom of the indentation was present —that sort of leathery or hardened feeling."

Dr. Sherman testified that, at the second autopsy, he called attention to the deep furrow in the neck, and put his finger in it. He stated that "the texture of the skin within this furrow had a leathery feeling. It had what Casper calls mummified." That he had seen other cases where death had been caused by strangulation with a cord, and that the furrow had the same characters as in the other cases.

Dr. Bridges testified that "the furrow was rounded at the bottom, about one-eighth to about a quarter of an inch thick, I should judge, and a quarter to half an inch broad. The lower or bottom part of the furrow or groove was rounded, so that it fitted the convex surface of my little finger, that I passed through on each side. The base of the groove was hard, and had this appearance that has been described—a parchment look."

Mr. Nat. B. Freeman testified that he had, during the war, been accustomed to handling corpses, and familiarizing himself with their external appearances; that at the second autopsy he examined the furrow, found that it "was deep enough for my finger to go partially into it;" that the skin at the bottom of the furrow appeared hard; "the feeling was a hard feeling; its appearance was similar in appearance to old leather."

In regard to the *cause of death*, Dr. Swinburne gave as his firmly settled opinion, based upon personal knowledge of the external and internal appearance of the body, that the death had been caused by strangulation with a rope or cord.

The position of the other experts was judicial, so far as concerned the cause of death; they gave their opinions upon hypothetical questions which embodied the evidence as to facts which had been given and bore upon the subject.

There were several hypothetical questions given, but for want of space only the one which bore directly upon the main issue as to the cause of death is here inserted.

"You examine about fifty-eight hours after death, in the middle of November, the body of a man found dead at about 11 P.M., having been last seen alive one hour and a half before, and then apparently not in a condition of apprehension of sudden death; you find it to be the body of an unusually large and powerful man, great muscular vigor, with a considerable development of firm fat, forty-one years of age; you find nothing unusual in the appearance of the face and the general surface of the skin, except the presence of small dark spots indicating a little effusion of blood in the skin of the back and the back of the right arm; a furrow about the sides of the neck nearly meeting in front and behind, about the size of the little finger, rounded at the bottom, and the skin involved in the furrow dense and hard, and a surface like parchment; the furrow beginning in front just above the larynx and extending upwards and backwards at an angle of nearly forty-five degrees; the brain and membranes perfectly natural and healthy, except a clot of blood on the surface on one side near the top of the head, the clot being evidently of very recent origin, but not sufficient in itself to produce death; the lungs deeply congested with dark liquid blood, but presenting no evidence of inflammation, a few small fibrous nodules, and the bronchial tubes and windpipe deeply congested and filled with bloody mucus; the heart and the bloodvessels, including the valves of the heart and the vessels supplying the blood to the substance of the heart, absolutely healthy and natural in size and in every other regard, excepting a slight unimportant thickening of some of the valves; the cavities of the heart containing a very small quantity of dark blood; the liver, spleen, and kidneys absolutely natural and healthy, except that they, especially the kidneys, are deeply congested with blood and of natural size and weight; a small quantity of undigested food in his stomach, the mucous membrane of the stomach and intestines congested, and a small area of apparent inflammation about the size of a dollar in the stomach; finding all of the organs in the conditions stated, and the furrow made as described above, what, in your opinion, was the immediate cause of death?"

To this, Dr. Wood answered, the death could only have been produced by strangulation with a cord. After the cross-examination of Dr. Wood, experts were called, one after the other, until the Court refused to hear any more. In this way, Drs. Porter, Sherman, Bridges, Avery, Lee, and Hand (the latter three gentlemen being practising physicians and coroners or ex-coroners of Chenango County, New York) were allowed to answer the hypothetical question, and all agreed with the answer given by Dr. Wood.

The only evidence offered by the plaintiff bearing upon the medico-legal facts in the case was:

First. *In regard to the two alleged chills* occurring

during his illness—the last one a week previous to his death.

The only evidence given concerning these attacks was that of Mrs. Bessie McDonald and Mr. Francis Downe. It was so indefinite, and would require so much space for its recital here, that the reader is referred to the book of corrected evidence. From it it is impossible to state with any degree of positiveness what the nature of the attacks were. It is not probable that they were malarial, for in the first attack there was no fever, and in the second attack the fever lasted for "perhaps half an hour," and the chief symptom was abdominal pain.

The counsel for the plaintiffs offered to prove the symptoms and nature of the sickness of Col. Dwight, and the cause of his death, by Drs. Orton and Burr, who attended Col. Dwight in his last illness, and were each of them on the witness-stand. According to the law of the State of New York no physician is allowed to testify concerning a patient, or to give information which has been imparted to him by a patient, unless the latter publicly gives his consent. And when the defence in an early stage of the trial sought to put Dr. Doane on the stand to prove that Col. Dwight's hemorrhage came from the lungs, they were debarred under this statute. The counsel for the plaintiffs contended that the right of waiver passes to the executors of a dead man; but on the part of the defendant such interpretation of the law was strenuously resisted. Many hours were spent in legal argument, but the court finally decided in favor of the plaintiffs, and permitted Doctors Orton and Burr to testify as to their knowledge of the sickness of Col. Dwight, and the causes of his death. When, however, this right was granted, the counsel for the plaintiffs did not exercise it, and neither Dr. Orton or Dr. Burr was asked a single question concerning the symptoms of Col. Dwight's alleged last illness, or the causes of his death.[1] Under these circumstances it seems impossible for a professional man to attach importance to the statements made by persons without medical knowledge concerning the symptoms of the alleged illness. There are no important data other than that furnished in the evidence for the defence by Dr. Porter, even for deciding whether the sickness was real or feigned. There is certainly no proof that the alleged chills were not produced by overdoses of a depressing vegetable poison, and the gastric symptoms by overdoses of arsenic, both of which drugs were in Col. Dwight's possession and under his personal control.

Second. *In regard to the occurrences of the night of Col. Dwight's death.*

The only important testimony was that of Mr. Charles A. Hull. According to Mrs. Owens, Mr. W. F. Spaulding and Mrs. Dwight were already in the room of Col. Dwight when she (Mrs. Owens) entered directly after his death. It is altogether probable that Mr. W. F. Spaulding has intimate acquaintance with the circumstances surrounding the death of Col. Dwight. The defence could not call him since, according to their theory of the case, he had guilty knowledge, and if he should testify falsely, they, not being able to cross-examine or contradict their own witness, would be held by his declarations. The failure of the plaintiffs to put either Mr. Spaulding or Mrs. Dwight on the stand, naturally excited comment.

Mr. Charles A. Hull testified that he had never sat up with Col. Dwight until the night of his death; that he had been his assignee in bankruptcy, but not intimately acquainted with him; that he had no knowledge or experience in nursing; that no medicines were left with him and no instructions given him by the physicians on Friday evening; and that Mr. Dwight sent for him the Wednesday preceding the Friday of his (Dwight's) death, and had requested him at that interview to sit up with him on Friday night because "in an emergency he thought I was cool and would not get excited." He also admitted on cross-examination that he had stated before the Coroner's jury that Dwight said "he wanted him because he would be cool in case anything should happen."

Mr. Hull testified that shortly after 10 o'clock:

"I stationed myself in a chair near the door leading into his bed-room, and this door was partially open, and I sat there. During the time I sat there, at one time the Colonel called me, and said his head was feverish and wished me to saturate a cloth in bay rum and put it on his head, and I did so. And at another time, he called for some water and I gave him a swallow of water. After that he seemed to sleep, and before, at different times, I thought he was sleeping, but of course it was uncertain, and I did not disturb him. Along about between 11 o'clock and half-past 11, I heard him gasp for breath, as it seemed to me, and he says, 'Charley,' and called to me, and I went in to his side as quick as I could and put my hand under his head, and raised his head up and gave him some brandy; and then I ran across the hall as rapidly as I could to Mrs. Dwight's door and rapped on it very loud, and went back to the bedside again, and I think I administered brandy a second time then, and I felt of his pulse; and in a short time Mrs. Dwight came out only partially dressed, and I asked her to touch the bell for Mr. Spaulding, and she did so. In a very short time Mr. Spaulding came up there, and was followed by Mrs. Owens, Mr. Spaulding's brother, and his family, consisting of his wife and daughter."

That about fifteen minutes before he heard the gasping, Col. Dwight took a cracker from a stand near the bed and ate it. Also that he (Hull) sat in a chair, so placed in the sitting-room that he could see all of Col. Dwight's movements through the open door. He further stated that Mr. Spaulding pinched Dwight's tongue, leading to the suspicion that it was protruding.

The only other evidence at all bearing upon the events now under discussion was that given by James E. Lee, the servant who brought the hot water in which, Mrs. Owens and Mr. Hull testified, the hands of Col. Dwight were soaked after she entered the room. Mr. Lee believed that he saw Col.

[1] Attorney-General Russell, in his speech, asserted that the plaintiffs' counsel had claimed the right of putting Drs. Orton and Burr upon the stand, with the expectation that the judge would decide against them, and that then they would say to the jury that they could have explained Col. Dwight's sickness and death by the physicians who attended him, but that the court would not admit the testimony.

Dwight breathing at the rate of about four or five times a minute. Before this, however, according to the statements of both Hull and Mrs. Owens, Col. Dwight was dead.

Third. As already stated the *expert testimony on the part of the plaintiffs* was limited to a description of the lesions found in the body after death. In regard to these lesions the cross-examinations of Drs. Hyde, Burr, Chittenden, and Orton, elicited the fact that there was very little non-agreement between them and Dr. Swinburne, except in regard to the appearances upon the neck.

It was claimed by several, if not all, of these gentlemen, that the so-called indentation upon the neck was simply a crease or fold in the skin; but on cross-examination they all admitted that they had signed at the time of the autopsy, when the body was before them, without comment or protest, an official description of this crease as "a heavy indentation, extending upwards and backwards from os hyoides to right around back of neck, and on left side, below the thyroid cartilage, running upwards and backwards at an angle of about forty-five degrees."

In the manuscript notes of the autopsy there were certain erasures and interlineations. The testimony as to whether these had been made before or after signing was conflicting, but on other points there was no question as to the authenticity of the notes which bore testimony to the existence of "several small ecchymoses of skin of back and shoulders; *anterior* part of right arm, small ecchymosis." In other respects the description corresponded with that given by Dr. Swinburne in the testimony for the defence, except that the word "bloody" had been scratched over with a pen, as it occurred in the notes before "mucus," speaking in reference to the bronchial tubes; and that, instead of the lungs being said to be emphysematous, they were spoken of as "unduly inflated."

Testimony was given by Mr. Van Vradenburg, Mr. Ayres, the undertaker, and James E. Lee, in regard to the existence of a furrow around the neck shortly after death. Mr. Van Vradenburg testified that his "examination of his neck" "was close and marked," and that he was led to make this examination "on account of something that was then stirring in my [his] own mind." The nature of this "something" was not in evidence, but Mr. Van Vradenburg further stated that "it did not lead him to investigate any other part of his [Dwight's] person," nor did he examine the feet or hands.

Mr. Ayres testified that he was the undertaker who prepared Col. Dwight's body, washing and dressing him; that directly after his death there was "no crease or mark as of a rope or otherwise upon his neck." He further testified that the body was placed in an ice-box in such a way that the head was forcibly bent forward on the body, the chin resting upon the chest, and the occiput being raised, so as to bend the neck at an angle of about forty-five degrees. He gave it as his opinion that the crease, or furrow, or indentation subsequently found in the neck of Col. Dwight was produced by the elevation of the head in the ice-box, and its subsequent restoration to the normal position. Mr. James E. Lee stated that he assisted the undertaker, and the crease was not there then.

After the plaintiffs had closed the case, the defence recalled their experts, and put to them the following hypothetical questions. There was no dispute whatever as to the agreement of the conditions of these questions with the facts of the case as testified to by the medical witnesses for the plaintiffs; in the second question, the testimony of Messrs. Van Vradenburg, Ayres, and Lee in regard to the non-existence of the furrow directly after death was omitted; the medical part of the question is taken almost verbatim from the notes of the autopsy, the disputed part of these notes being omitted.

Question 1.[1] "Assuming that a man of 41 years of age, who had previously enjoyed robust health, had been complaining for about three weeks, and was found on a Saturday morning in bed, shivering, teeth chattering, surface clammy and cold, with the blood settled under his nails, and so continued from one to two hours, breaking out into a cold sweat, with a feeble, whispering voice, and that this attack passed off without fever; that the second Friday after this occurrence, having during the day been up attending to business with his lawyer, and having his beard dressed by a barber, he was left about 10 P.M. by his doctor in such a condition as to create no alarm; that at or about 11 P.M. he spoke pleasantly to his attendant, calling his attention to his manner of eating a cracker, helping himself to one from a dish near his bed, and chewing it without difficulty; that within fifteen minutes the attention of the attendant was called to such man by a gasping noise, and that this man was dead in a few minutes thereafter; that at an autopsy held within fifty-eight hours after death the liver and spleen were found to be normal, except congested, the heart nearly empty, and that there was no pigmentation anywhere; could or could not such a man have died of congestive chill, or any other form of malarial fever?"

The uniform answer to this question by the experts was that, in their opinion, he could not have so died.

Question 2. "Suppose that a man, after an obscure alleged illness of about five weeks' duration, is on a given day able to be up and transact business with his lawyer and have his beard trimmed; is left by his doctor at 10 P.M. on the same day, in such a condition as not to give any cause for alarm; and that at 11 P.M. is talking pleasantly to his attendant and eating a cracker, and in less than half an hour after is dead; and that at the autopsy, made fifty-eight hours after death, the following conditions are revealed: a heavy indentation, extending upwards and backwards from os hyoides to right around back of neck and on left side below the thyroid cartilage running upwards and backwards at an angle of about forty-five degrees. Post-mortem discoloration of posterior portion of body, several small ecchymoses of skin of back and shoulders; anterior part of right arm small ecchymosis. Thorax, lungs, and heart in natural position, except that the lungs are unduly inflated. About four ounces of serum in bottom of left pleural cavity; the same amount in right pleural cavity. Left lung one pound and three-quarters; bronchi congested and coated with mucus. Upper lobe congested and œdematous; lower lobe still more congested and œdematous.

[1] The first part of this question was based upon the testimony of Mrs. MacDonald.

Right lung two pounds; bronchi congested and coated with mucus. Upper lobe, at the apex several small fibrous nodules; rest of upper lobe congested and œdematous. Lower lobe congested and œdematous. Heart healthy; weight, fifteen ounces. Right ventricle contains a little fluid blood, not over one-half ounce; left ventricle contains little fluid blood, not over one-half ounce. Left auricle contains a little clotted blood. Stomach, at the fundus mucous membrane softened and partly destroyed by post-mortem changes. Pyloric end of stomach, mucous membrane studded with small white spots denoting chronic gastritis. Liver congested more than usual; normal color and consistence. Kidneys uniformly congested, and otherwise healthy. Epiglottis, larynx, and trachea congested and coated with mucus. Inner surface of the dura mater on the left side, chronic hemorrhagic pachymeningitis, with a small extravasation of blood on the left side, over the posterior portion of the parietal and anterior portion of occipital lobes. Pia mater of convexity normal, except discoloration over occipital lobes from blood. Brain neither congested nor anæmic, otherwise healthy. And further, that at an inquest held five months after the first autopsy, the indentation on the neck was still distinctly visible; could or not death have been produced by natural causes?"

The answer to this question was given by Drs. Porter, Swinburne, Bridges, Sherman, and Wood, who agreed in stating that it could not.

To each of these physicians the further question was put as to what in their opinion was the cause of death under the conditions named. All agreed in answering positively that death was produced by strangulation with a rope or cord.

The following question was asked in regard to the furrow:

Question 3. "Assuming that the body of a man weighing in the neighborhood of two hundred pounds, forty-one years of age, having a full, fleshy neck, about two hours after death is placed upon a board on its back, with the head raised upon a book and two pillows, and left in that position for about nine hours; and then placed in an ice-box with its head elevated at an angle of about forty-five degrees, and left there for about forty-eight hours, and then removed and placed flat on a table; is it possible that a heavy indentation, commencing near the Adam's apple, and running upward and backward at an angle of about forty-five degrees on either side to within less than two inches of meeting in the rear, could be produced by the changes in position stated?"

The negative answer which was given by the experts to whom this question was put, seems to me entirely correct. I cannot conceive how a fold or crease made by bending the neck should deserve the use of the term "heavy indentation" to describe it, and it is still more inconceivable to me that a fold, or crease, should be made in the *back of the neck* by bending the head forwards, which would necessarily stretch the parts said to be folded. Further, a crease made in the manner described would be most marked in the front of the neck where the centre of the fold would occur, whereas the indentation was not visible at this place. Moreover, the plaintiffs' experts stated that the indentation involved the subdermal adipose tissue of the sides of the neck, and it is very hard to understand how a crease made by bending the neck forward for a day or two could do this and be so deeply impressed as to remain distinctly perceptible after the body had been buried five or six months.

In concluding this statement of the case of Col. Dwight, it remains only to call attention finally to the remarkable agreement that there is in the testimony, and to the fact that there was extremely little conflict, practically no conflict at all, between the experts; that the sole contradiction of any importance was between Messrs. Van Vradenburg, Ayres, and Lee on the one hand, and the experts on the other. If the former witnesses were correct in affirming that there was no indentation in the neck directly after death, the theory of strangulation with a cord drops; although it would still be proved by the internal appearances that death was caused by mechanical asphyxia produced in some other way than by a cord. It must be remembered that it is a well-known fact that in suicidal hanging, in which the suspension has been only for a few minutes, the cord-mark acquires its color only some hours after death, and then becomes more prominent; that Col. Dwight was a heavily bearded man, and that his beard might have hid the fresh indentation from an unsuspecting undertaker. If, finally, it is considered that there is an absolute conflict of testimony, I must leave to the judgment of my readers the probability of the truth being upon the side of Van Vradenburg and the undertaker, with his assistant, or on that of Drs. Swinburne, Sherman, and Bridges, who especially testified to the medico-legal facts in the case, and were corroborated in almost every particular by the notes written at the autopsy and signed by each of the fifteen doctors there present, and also by the evidence of two laymen, Freeman and Hitchcock, as to the appearance of the indentation at the second autopsy.

A CASE OF SEVERE HEMORRHAGE FROM THE KIDNEY, SUCCESSFULLY TREATED BY AN UNUSUAL REMEDY.

BY S. J. RADCLIFFE, M.D.,
OF WASHINGTON, D. C.

THE following unique case of hæmaturia, due to hemorrhage from the right kidney, I think is worthy of record. It shows how formidable such cases may appear, and at the same time how simple, and yet how effective the remedy we have at command to relieve it, as was evinced in this case.

August 2, 1883, I was called to see Miss S., a spare, delicate lady, about twenty-five years of age, a former resident of Louisiana. She had suffered from malarial disorders, such as remittent and intermittent fevers. Her mother died of heart disease, subsequently to rheumatic fever, and had suffered from hemorrhage from the lungs and nose (hæmoptysis and epistaxis), due, probably, to a hemorrhagic diathesis. Other family history unimportant.

Previously to my seeing her she had spent two weeks at Oakland, Maryland, where the temperature is invariably low and subject to sudden changes, and while there was attacked with hæmaturia of

unusual and alarming severity, passing almost pure blood, on account of which, by advice of her attending physician, she returned to Washington.

She had had such an attack, though slighter, two years before; and one year before her feet swelled, and she had another slight attack, lasting a few days, four months before.

At the time of my visit she was a little flushed; temperature 99.5°; pulse 100, weak and small; respiration slightly hurried, but regular; bowels active, and menstruation normal; heart sounds and rhythm normal.

Her general appearance was feeble; she complained of lassitude, and of an aching pain in the right side, in the region of her right kidney, paroxysmal in character, causing during the paroxysms much suffering, and attended by considerable nausea, and she was passing during the twenty-four hours from thirty to forty ounces of thick, muddy, dark, brownish-red urine, uniform in color throughout, quite fluid at top, but forming a thick, partly coagulated, brighter colored deposit or mass at the bottom of the vessel, and showed here and there more or less flaky or shreddy particles.

During the paroxysms of pain and nausea, which at times were severe, the discharge of bloody urine was less, and a little varied in color, on account, probably, of obstruction of the pelvis of the right kidney, and the flow of urine coming mainly from the left kidney. In every other respect the discharge was the same, and fully proved its hemorrhagic nature. She had no pain over the bladder region, or tenderness on pressure, and efforts at micturition were not attended by discomfort or pain, or only occasionally so, as the effort in passing the urine was not great, and not generally urgent. The urine seemed to accumulate so slowly in the bladder that she was not cognizant of any desire to micturate until the viscus was sufficiently full, when she would void it not oftener than three or four times in the twenty-four hours, and it always came in the thick, muddy stream as found in the vessel.

Under the microscope the field was crowded with red blood-corpuscles, some few epithelial scales from the bladder, and a few tube casts, some studded with blood corpuscles. It was nearly neutral or alkaline in reaction. With heat there was thrown down a dark brownish albuminous deposit of about two-thirds, light and frothy at top, and denser below. The fluid on standing, as passed from the bladder, in a test-tube, showed a sediment of one-third, of dark brownish color, the clear portion above being dark claret. The specific gravity was 1.028. By agitating it in the vessel the deposit would partly mix with the more fluid portion, showing no firm clot, but on settling again would flatten out and become smooth, and fibrinous in appearance. No moulds of the pelvis of the kidney or ureter were discovered by an ordinarily careful examination, nor were there any clots passed large enough to obstruct the passage through the urethra, or other parts, sufficiently formed to indicate their source.

This was the condition of the case when first examined, and which continued daily, with very little deviation or change, and constituted its history up to the nineteenth day. A nearly equal quantity of bloody urine was passed each day, having the same general characters, and the hemorrhage continued with such disheartening persistency, the debility and feebleness becoming more and more pronounced, the drain upon her system manifesting itself hourly by the feeble action of the heart, the impending syncope being so great as to urge the necessity of keeping her bed, and assume absolutely the recumbent position, that from hopefulness the patient lost all courage, and began to be very desponding and to regard the future as very gloomy. The pulse-temperature rate was almost always in direct ratio, and a little above normal; the ratio being about 90: 99 *vel* 100: 99.5, and seemed to be about the same morning and evening, and exhibited no irregularity, apyrexia, or exacerbation. The condition was apparently the result of nervous irritability or debility rather than of febrile action.

Her attending physician at Oakland had prescribed gallic acid in large doses, but with no favorable result. I continued the gallic acid alone, and in various combinations for several days, combining the acid with quinine, with ergot, with sulphuric acid, and with a menstruum of cinnamon-water, with opium in several forms added, with like results. I prescribed also tannic acid, sugar of lead and opium, fluid extract of ergot, infusion of buchu and matico, muriated tincture of iron, and this with quinine; extract of logwood, extract hamamelis, with ice externally and internally, counter-irritation by sinapisms and blister over the region of the right kidney, and enjoined quiet, absolute rest in bed with the head low, and every means to allay excitement or agitation of mind or of the nervous system, besides a nourishing diet of milk and beef extract. This treatment was continued until the 21st of August—the nineteenth day of treatment—giving each prescription ample time to operate, and, with the exception of the fluid extract of hamamelis—which seemed to check or lessen the hemorrhage for from twenty-four to forty-eight hours—it appeared as if I might as well have given her so much cold water.

Having gone through this list of approved remedies, in addition to the counter-irritation already set up, and continued, without any real improvement in the case, as a last resort, on theoretical grounds, I prescribed Rockbridge alum water, having prescribed it before with benefit in chronic discharges, as in serous diarrhœa and in bronchorrhœa. I directed it to be taken in champagne-glassful draughts every three hours, to be increased in quantity if found necessary. After the third glass, really, its beneficial effects were manifested. On the second day, the improvement was still more observable. The urine was lighter in color, only smoky, and but little sediment. On the third day, a little return of hemorrhage, with some clots, and pain in the right side. On the fourth day, the urine was nearly free of blood corpuscles; no smokiness; of a dark amber color; only a trace of albumen, slightly milky by heat. On the fifth day, the urine was nearly normal in color and quantity, only a scattered corpuscle here and there, and but a faint trace of albumen. On the sixth day, the urine was normal in

quantity and quality, the color light amber and clear, the sp. gr. 1.018; there was no deposit, or blood-corpuscles or casts. On the 28th of August, one week after beginning the use of the alum water, though quite weak and pale, her appetite had returned; she was able to get on the lounge, and convalescence seemed to have fully set in.

On the 16th September, she had been out riding twice; her appetite improved, and she was cheerful. Her pulse was still quicker than normal, and weak, and she had emaciated considerably, but had had no return of the hemorrhage, and she considered herself safe from that while she took the water, which I ordered continued indefinitely.

At the present time, she is able to take walking exercise to a limited extent, and has gained in flesh and vigor; at the same time, she shows a condition of marked anæmia and of impaired health, which may or may not be overcome in time.

The object I have in view in reporting this case is mainly to show how promptly a natural mineral water relieved it after other usually effective and approved remedies had totally failed to do so, and not to discuss the pathological condition lying behind it, as that may be veiled in uncertainty. The condition may have been that of anæmia, of progressive anæmia, or anæmia or blood-poison of malarial origin, in a subject fully susceptible to the malarial influence, or a predisposition from a hemorrhagic diathesis, all or either of which would be a proper diagnosis. There was no malignant trouble discernible either of the kidneys or bladder, and it could hardly be called a case of simple hyperæmia, or of acute or chronic Bright's disease, or scorbutus or purpura. The hemorrhage, considered as a symptom, was very formidable, and I think such a condition is seldom encountered, and I can believe now that there may be instances where such a hemorrhage might prove fatal.

In the analysis of Rockbridge Alum Water Spring, No. 4, made by Prof. M. B. Hardin, of the University of Virginia, one gallon of 231 cubic inches contained:

Arsenic,	Trace
Antimony,	Trace
Lead Sulphate,	Trace
Copper Sulphate,	0.10370
Iron Persulphate,	2.90132
Magnesia Sulphate,	1.37352
Nickel "	0.22871
Cobalt "	0.08124
Zinc "	0.21748
Aluminium "	72.37335
Calcium "	2.31527
Magnesium "	7.36110
Potassium "	0.17586
Sodium "	0.03463
Lithium "	0.03241
Free Sulphuric Acid,	3.06633
Silicic Acid,	4.38346
Sodium Chloride,	0.14246
Calcium Phosphate,	0.05174
Calcium Fluoride,	Trace
Ammonium Nitrate,	Trace
Organic Matter,	Trace
	94.84258

Cubic inches of gas in a gallon of water:

Carbonic Oxide,	12.72
Oxygen,	1.04
Nitrogen,	4.72
	18.48

Temperature, 54.5° F.
Specific gravity, 1.10174.

MEDICAL PROGRESS.

CHLORAL POISONING.—DR. PAOLO ROSSI publishes a case of poisoning by ʒvij of chloral hydrate, which is chiefly interesting on account of the recovery of the patient.

The patient was a young man, aged twenty-five, who took ʒvij of chloral hydrate dissolved in water, half an hour after eating. About half an hour afterward ʒj of cherry-laurel water was given. Two hours after the ingestion of the drug the patient was seen by Dr. Rossi. At that time the patient had the appearance of one attacked by severe cerebral hemorrhage. The face was congested, the respiration stertorous and 32 per minute, pulse small and 132. The temperature was normal. Cutaneous anæsthesia; muscular relaxation was complete; the pupils were contracted, but mobile. There was no vomiting or purging. The cherry-laurel water had had no effect.

Vomiting was produced by titillation of the fauces. Twenty-eight sinapisms were applied, and ♏xv of ether were injected hypodermatically; an ice-bag was applied to the head, and a clyster of fʒvj of alcohol was administered. About two hours afterward he began to move his arms. Little by little he began to move his body, and finally sat up. On the next day a large dose of citrate of magnesia was administered, which produced four or five evacuations.—*Gaz. degli Ospitali*, October 10, 1883.

HELENINE IN DISEASES OF THE RESPIRATORY APPARATUS.—DR. F. VALENZUELA reports a number of cases of pulmonary affections in which helenine has given very good results.

1. A man, æt. 46, had chronic broncho-pneumonia which had resisted all the usual remedies. Treatment by helenine was commenced to the exclusion of other remedies. In fifteen days there was a very decided amelioration of the disease and of the general health.

2. Male, æt. 36. Pulmonary tuberculosis was diagnosed. The patient had a tuberculous spot at the summit of each lung, and was much troubled by a persistent cough and bloody expectoration. Helenine was given in doses of gr. one-sixth in pill, ten every day, for two weeks. At the end of that time, there was very marked improvement in the physical signs and general symptoms.

In private practice, Dr. Valenzuela has excellent results from helenine. The best effects from it are obtained in whooping-cough. It may be administered internally or by inhalation: the first method is always sufficient. It has a tonic effect on the general system, increasing the appetite, and seemingly aiding digestion.—*Bull. Gén. de Thérap.*, December 15, 1883.

RUPTURE OF THE VESSELS OF THE UMBILICAL CORD.—This case, both rare and interesting, is reported by the late DR. RIVET in the *Archives de Tocologie*, September, 1883. It was observed in the service of Dr. Boudin at the Charité.

The case was that of a woman pregnant with twins. One child was delivered without accident, and the second, enveloped in an amniotic sac, presented. The membranes did not rupture until the head presented at the vulva, when a jet of blood was seen to escape from the free edge of the ruptured sac. Delivery was effected, and the following state of things found: There were two distinct placentæ. Into the first the cord was inserted marginally, in the second centrally. The rupture had taken place at the entrance of the vessels, and the two arteries and the vein were ruptured. This explained the escape of blood when the second sac was ruptured. The second child was born apparently dead, but was resuscitated.—*Bull. Gén. de Thérap.*, Nov. 30, 1883.

TUMOR OF THE ANTERIOR MEDIASTINUM.—PROF. PIETRO BURRESI reports the following case:

A. M., æt. thirty-five years, a robust man, of healthy family, and with no history of hereditary disease. In infancy, and up to the age of eighteen years, he had suffered with blennorrhagia. He had an attack of typhoid fever at the age of twenty-one, and was ninety-three days convalescing. Three years later, he had an ulcer on the glans, which did not entirely cicatrize for fourteen months. There was no inguinal adenitis during the period of this ulcer, nor was it followed by syphilitic manifestations of any kind. At the age of twenty-five years, he had attacks of malarial fever. Since that time he has not been well.

In 1880 he began to complain of various pains, which he described as rheumatic, and especially of a pain situated in the anterior superior part of the chest. In 1882, the pain having increased, he entered a hospital, having incessant cough and some oppression of respiration. In April, 1883, the fever returned, accompanied by a dry cough. The pain extended from the left subclavicular fossa to the sternum and precordial region, and extended down the left arm. In the latter part of April, tumefaction of the face and cyanosis began to appear, which gradually increased, and extended to the neck and the whole upper part of the chest, with a sense of constriction, dysphagia, and continued oppression of respiration. Slight epistaxis occurred early in May. The skin of the upper part of the body became bluish, the arms and forearms being also involved. The respiration was irregular and labored. The cardiac impulse was weak, but distinctly appreciable in the fifth intercostal space, and extended to the parasternal line. The left radial pulse was somewhat smaller than the right. These symptoms and the physical signs common in such cases increased, and the patient went from bad to worse, and died on May 30, 1883.

Autopsy.—On opening the chest there was found adherent to all the surrounding structures, and completely occupying the anterior mediastinum, a tumor extending from the base of the neck to the diaphragm. It was adherent to the costal cartilages and sternum on both sides, and to the costal pleura, the left lung being also invaded to a considerable extent. The tumor was of ovoid form, measuring in its long diameter about eight inches, and about five and a half inches in thickness. Microscopical examination by Dr. Banti showed it to be a round-celled sarcoma.

The left lung was invaded for about two-thirds its whole extent, the other third being in a state of atelectasis from compression. The right lobe was a little smaller than usual, and atelectatic in the upper part. The anterior portion of the external surface of the pericardium was invaded by the neoplasm, the auriculo-ventricular groove being filled. The aorta was embraced by the tumor in its whole ascending portion and arch, the origin of the innominate and corresponding common carotid being also involved, as was a part of the left subclavian artery. The right subclavian was completely embraced by the tumor in its first part, and constricted. The superior vena cava was compressed, as was the pulmonary artery. [For other cases, with account of symptoms and autopsies, see the *Am. Journ. of the Med. Sciences*, Jan. 1884, p. 271.]—*Lo Sperimentale*, Nov. 1883.

TREATMENT OF PHAGEDÆNIC CHANCRE WITH PYROGALLIC ACID.—M. VIDAL, Surgeon to the Hôpital Saint-Louis, has called the attention of the Academy of Medicine to the treatment of phagedænic chancre, which he has used for several years. The following are the formulæ usually employed by him: Pyrogallic acid one part, vaseline four parts; another, which has given excellent results, is pyrogallic acid and starch each one part, vaseline three parts. For anfractuous sores, with many prolongations, he uses the following: Pyrogallic acid one part, powdered starch four parts. This powder is blown into the various parts of the sore by means of a powder-blower. The dressings to be renewed twice a day. Only a fresh preparation should be used, kept in a closely stoppered bottle.—*Bull. Gén. de Thérap.*, November 30, 1883.

EXPERIMENTAL DIPHTHERIA.—A series of valuable experiments and investigations upon the subject of diphtheria have lately been published in Leipsic by DR. O. HEUBNER, and reviewed in the *Centralblatt für klinische Medicin*, No. 43, 1883. Following the lines previously traced by Treitz, Oertel, Weigert, and others, who had already succeeded in the artificial production of false membranes upon mucous surfaces, he made a series of experiments with the view of producing such artificial membranes in a manner more resembling the natural processes of disease than had before been attempted. By modifying the blood supply of a portion of the mucous membrane of the bladder he succeeded in producing a form of epithelial necrosis with the formation of a definite membrane in every way corresponding to that found in diphtheria. By occluding a large branch of an artery for several hours, and then restoring the circulation, he found that the following changes were induced: Inflammatory œdema with detachment and vacuolation of the epithelial cells, the mucous membrane becoming surrounded with an albuminous exudation which speedily coagulated. In about ten hours parts of the tissue thus affected showed signs of necrosis; in forty-eight hours these parts became still further decolorized, and stood out as yellowish-white patches upon the surface of the mucous membrane. On the edges of these patches the surrounding healthy

epithelium was observed to be thickly infiltrated with blood corpuscles. This coagulation-necrosis advanced steadily, gradually attacking the whole mucous membrane of the bladder, the hemorrhagic infiltration advancing with it. It seems more than probable that the production of simple membranous croup in the human subject may be due to a similar temporary arrest of circulation from spasmodic contraction of vessels. But from Heubner's experiments it must be concluded that the immediate cause of the local affection of the mucous membrane in diphtheria must be temporary arrest and subsequent restoration of the circulation. This, however, is only a small part of the pathology of the disease. By injecting into the circulation portions of genuine diphtheritic membrane, it was found that the poison concentrated itself especially within the artificially produced patches of membrane, and injections made with this latter membrane were found to be far more fatal in their results than were those made with the first membrane, produced by the natural processes. Further, it was found that injections of apparently healthy membrane in the neighborhood produced no result whatever. That an active poison must be at work in these cases is almost certain; but the question of its nature remains still unsettled. Whether it must be ranked with the class of septic poisons, of which Koch has enumerated a series, or whether a genuine diphtheritic poison exists distinct from these, cannot at present be proved, although Heubner's experiments have fairly opened a way which may eventually lead to its discovery.—*Med. Times and Gaz.*, December 1, 1883.

METHOD OF HASTENING THE ANÆSTHETIC ACTION OF THE ETHER SPRAY.—The ether spray is employed frequently at the Hôpital St. Louis in Paris for the production of local anæsthesia. A little device, first indicated by Dr. Letamendi, of Barcelona, but not hitherto utilized in practice, is employed by Dr. Vidal to shorten the duration of the process of congelation. It consists in making a slight prick with a needle at the point upon which the spray is directed, at the moment when the skin assumes a purplish hue, and when the ether, commencing to solidify, assumes an oily consistency. The little puncture made at this time excites a reflex constrictive action of the vaso-motor nerves, the blood is driven from the part, and the skin becomes white. Another method of hastening the process consists in placing little wads of lint about the part, thus increasing the surface of evaporation.—*Practitioner*, Dec. 1883.

TURPENTINE IN DIPHTHERIA.—According to DR. SATLOW, spirits of turpentine, administered internally, gives superior results to the usually employed remedies for diphtheria. Its value was accidentally discovered by Bosse, of Domnau, a spoonful having been given by mistake to an infant suffering with diphtheria. Satlow first used it in teaspoonful doses, in March, 1881, in the case of an infant in immediate danger of death. The result was excellent. Two other trials, followed by equally favorable results, convinced him of the good effects of this substance, and of its harmlessness in large doses.

He has now used turpentine in forty-three cases, and has had only one death, the result of paralysis of the heart in a case already convalescent. Of the forty-two cases of recovery, three had diphtheria of the larynx and nose, seven had albuminuria, and one had hæmaturia. There was paralysis in four, and strangury without albuminuria in some others.

Satlow uses, when possible, the freshly distilled spirit in the following doses: For children, up to the age of nine years, he gives a coffeespoonful; for children above the age of nine, two coffeespoonsful, and for adults a dessertspoonful during the day, always giving a quantity of milk or wine after the dose. The appearance of strangury is an indication for the interruption of the treatment, but not for its cessation.

The tolerance of patients for the medicine is variable. After taking it they sometimes complain of burning pain in the throat, a sense of pressure in the stómach, and sometimes vomit. The addition of ether ℥xv to spirits of turpentine f℥ss will often prevent the vomiting. The greater part of the medicine is eliminated with the feces and urine, the latter having the peculiar violet odor so well known.

The action of the remedy is manifested by swelling and softening of the membranes, which become transparent and finally disappear with the inflammatory phenomena, the painful deglutition, and the ganglionic swelling. The complete effect is only manifested on the third or fourth day in grave cases. The efficacy of turpentine depends on its antimycotic properties, Koch having shown that a solution of one to seventy-five thousand will arrest the development of charbon spores. —*Centralbl. f. die gesammt. Thérap.*, September, 1883.

MOSS AS A DRESSING.—Turf has been sometimes used topically as a dressing for suppurating wounds. Its absorptive property is due in a great measure to the moss which it contains. M. NAGEDORN employs fresh moss in the same manner, dried at a temperature of 105° or 110° C. in a stove, and placed in pillows. In using this with the antiseptic dressing, a small cushion of gauze, impregnated with a solution of corrosive sublimate, is first applied; then a larger cushion, to cover the field of operation, and then a third still larger, the whole being maintained by bandages. This dressing is sprinkled, as necessary, with an antiseptic fluid.—*Journal de Méd. de Paris*, December 15, 1883.

THERAPEUTICS OF IODOFORM.—FRUEHWALD reports twenty-six cases of diphtheria which were treated with iodoform in Prof. Widerhofer's clinic at Vienna. It was employed by insufflation, or by dusting; also by applications of a ten per cent. iodoform-ether solution. In some cases, especially in mild ones, there was an early expulsion of the diphtheritic deposit. In others, particularly in severe cases, neither a local nor a general effect was accomplished. Also in one case of a diphtheritic wound, iodoform proved useful as a topical application. In another case of diphtheritic conjunctivitis the effect was less marked. In ten of these twenty-six cases the patients died. Iodoform also proved to be very useful in the treatment of stomatitis ulcerosa, the affected parts being brushed over, once daily, with cotton which had been dipped in iodoform powder. Gelatine bougies containing fifty per cent. of iodoform, six centimetres long, and from three to five millimetres in diameter, were, in certain cases, remarkably effective in vulvo-vaginitis. Unpleasant results were never observed. —*Archives of Pediatrics*, January, 1884.

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SUDDEN DEATH IN DIPHTHERIA.

THE accidents which may occur in any case of diphtheria must be apprehended until health is fully restored. The most formidable of these accidents is sudden death. In our last issue there is reported an interesting example of such an unexpected termination of a case, severe indeed, but by no means remarkable for the extent and variety of the lesions. Other instances have appeared from time to time in our columns, and in the pages of our contemporaries. It may, therefore, be useful to place before our readers a survey of the conditions which result in sudden death in some cases of diphtheria.

It is first to be noted that many of these suddenly fatal cases occur during the period of supposed convalescence. They are the more to be dreaded in that an early restoration to health is expected by the friends, and confidently predicted by the physician. Very often the end comes when the patient, raised to the erect posture, is in the act of taking food. Failure of the heart is supposed to be the cause of death, when apnœa has been induced by closure of the glottis by food or drink. This may occur in mild cases of diphtheria. Donders was amongst the first, if not the very first, to show that paralysis of the muscles concerned in deglutition—especially the pharyngeal muscles—is a not uncommon condition in simple cases, and often precedes all other symptoms of diphtheritic paralysis. The alimentary bolus not being properly grasped, and the entrance to the larynx insensitive, articles of food and drink may readily drop into the chink of the glottis. As respiration is apt to be hurried, and the need of air imperious, an ill-timed inspiration may precipitate the catastrophe. The position of the epiglottis is another element in the sources of danger. Not properly supported, and therefore much inclined downwards, particles of food accumulate behind it, and thus, suddenly, by a strong inspiration, it is brought down on the larynx as a valve, which is the more firmly fixed there the stronger the inspiratory efforts. Thus, in several modes, may life be suddenly extinguished by closure of the glottis. Less rapidly may the same mechanism determine a fatal result by setting up a traumatic pneumonia. Small particles passing the chink of the glottis enter the lungs, and excite a peculiar and rapidly fatal inflammation.

Simultaneously with the faucial paralysis, the respiratory muscles may be affected, and although this usually induces a rapid congestion of the lungs, it may be a cause of sudden death. Without any pronounced symptoms, besides some embarrassment of breathing, which may be largely subjective, the respiratory muscles may suddenly fail and death ensue with apnœa. These modes of sudden death, are, however, far less common than that due to paralysis of the heart.

It is quite foreign to our purpose to consider the various lesions of the heart which may occur in the course of diphtheria. We are here concerned with those changes which are common causes of sudden death. These are chiefly two: myocarditis, or parenchymatous degeneration of the muscular tissue, and paresis of the cardiac motor ganglia. To the changes of the former may be added the effects of migrating micrococci colonies, and the latter is a part of a general change in the ganglia of the sympathetic. Damaged in respect to one or both of these parts, the heart may still be capable of carrying on its work when the body is recumbent. The fatal paralysis occurs when a change to the upright position requires the organ to put forth more vigorous efforts. Either the ganglia cannot produce the needed force, or the muscles prove unequal to the sudden strain, or both fail simultaneously. Quick arrest of the heart's action may also result from heart-clot. Weakness of the muscular tissue of the organ, and consequent feeble contractions, is an important factor in these cases, but the most influential condition is hyperinosis of the blood. Ulcerative endocarditis, in which, also, migrating micrococci colonies may play a part, favors coagulation of the blood. Although heart-clot is popularly assigned a high place as a cause of sudden death in diphtheria, it is, probably, very infrequent.

Another mode of sudden death—cerebral—there is reason to believe, does happen more frequently than is now supposed. We refer to cerebral hemorrhage and the so-called serous apoplexy, both accidents which may attend on albuminuria. In

making this statement we are not unmindful of the convulsive phenomena, and the direct interference with the respiratory centre, which may be due to the cerebral changes consecutive to albuminuria.

The means to obviate the danger of sudden death in diphtheria, must be largely prophylactic. The necessity for the careful administration of food needs hardly to be stated. In the cases of paralysis involving the apparatus of deglutition, the use of the feeding-pump of Débove might prove valuable. In the condition of anæsthesia present in these cases, the operator passing the stomach-tube should not fail to remember the unfortunate experience of that London surgeon, who, supposing his tube had reached the stomach, was found after death to have filled his patient's lungs with the chalk-mixture intended for the former organ.

The measures necessary to preserve the strength of the heart, to be properly stated, would require a dissertation on the treatment of diphtheria. We should not close, however, without a word of caution in regard to the use of digitalis. A remedy like this, which raises the vascular tension and increases the inhibitory action of the pneumogastric, may impose a fatal burden on the heart's movements. The heart is to be strengthened rather by those means which promote digestion and assimilation.

THE TRANSPLANTATION OF CARCINOMA AND SARCOMA.

In a contribution to the *Revue de Chirurgie*, No. 11, 1883, M. Nicaise discusses the subject of the inoculability of malignant growths, and arrives at some conclusions which are at variance with the published experiments of not a few observers. Although it is quite true that attempts to reproduce carcinoma and sarcoma by means of inoculation under the skin with the juice of these morbid growths, by its injection into the veins, or by inserting particles of the fresh tumor into a recent wound, usually fail, it is none the less true that a sufficient number of positive results have been obtained to demonstrate conclusively that these products may be transmitted in the ways just mentioned.

In summing up the results of his labors, which were confined solely to an examination of the literature of the subject, the author formulates the following conclusions: First, that the transmissibility of cancer from man to animals has not been demonstrated; and, secondly, that the same statement holds good for the transmissibility of cancer from an animal to an animal of the same species. Bearing in mind that he employs the term cancer as the substantial equivalent of sarcoma and carcinoma, we think that we will be able to show, in the cause of scientific inquiry, that both propositions are groundless, possibly from an insufficient knowledge of the entire field of experimentation.

That the malignant growths may be transmitted from man to the lower animals has been demonstrated by the following observers: Lebert and Follin injected from sixty to seventy grammes of the juice of carcinoma of the breast into the jugular vein of a dog. On the death of the animal, at the expiration of two weeks, a number of carcinomatous nodules were found in the heart, and the liver was the seat of miliary carcinosis. Professor Klencke, of Braunschweig, inoculated the conjunctiva and lachrymal gland of an old horse with the juice of a pigmented sarcoma of the orbit. A black spot remained in the conjunctiva, and, at the end of sixteen weeks, the entire gland was converted into a similar growth, which produced protrusion of the globe. Langenbeck injected fresh carcinomatous juice into the femoral vein of a dog. The animal was killed in three months, when three flat nodes were detected in the lung, which Virchow pronounced to be carcinomatous. O. Weber injected the juice of a medullary cancer into the femoral vein of a dog, and inserted particles of the tumor under the skin. At the end of sixteen days a large growth, possessing the same structure, had developed under the skin. Lebert and Wyss inserted the juice of a melanotic sarcoma under the skin of a rabbit; on death, in two months and a half, a tuberous pigmented mass, two inches square, had formed. Finally, Mr. Wile succeeded in transmitting carcinoma from man to two dogs by inserting grafts under the skin.

The positive results obtained from subcutaneous grafting in animals of the same species, are, so far as we are aware, only three in number. Noivinsky inserted particles of medullary carcinoma of the nose of a dog into fresh wounds made in the backs of other dogs. Two out of the fifteen developed carcinoma at the point of inoculation. The third case occurred to Goujon, who succeeded in grafting a guinea-pig with epithelial carcinoma derived from another guinea-pig.

In connection with this subject, we may be permitted to refer to a case which proves the transmissibility of medullary sarcoma from an inferior animal to man, and which may be found in the *Wiener medizinische Jahrbücher*, Bd. 2, p. 162, 1862. A subcutaneous recurrent encephaloid sarcoma behind the scapula of an ox was incised on account of deceptive fluctuation, and gave exit to a sanious discharge. The wife of the owner, aged twenty-three years, cleansed the part many times, there being a wound on the outer side of the fourth finger of her right hand. In a few days a small warty excrescence was noticed at the site of the lesion, which had attained a diameter of three-fifths of an inch in one month,

was the seat of burning pain, and was covered with a grayish-white pellicle. Dr. Kuhn, of Niederbronn, finding it to be a sarcoma, destroyed it with the Vienna paste, and there was no recurrence in three months.

In the preceding paragraphs we have briefly referred to seven examples of the transferrence of malignant growths from man to the lower animals, in three by the injection of the juice into the veins, in two by the insertion of the juice beneath the skin, and in two by grafting portions of the tumor into recent wounds. In three examples, moreover, positive results were obtained by grafting from one animal to another of the same species, and in one case the juice of a sarcoma of a bullock set up a similar disease in the human subject. These positive results sustain, therefore, the view expressed in the second paragraph of this criticism, namely, that the conclusions of Nicaise are erroneous.

In a clinical lecture delivered during the current year, Dr. T. G. Thomas stated that there is great danger of propagating carcinoma by means of sexual intercourse, and that repeated instances of cancer of the penis being contracted in this way are on record. In the *Weekly Medical Review* for October, he modifies these assertions, which he cannot sustain, either from personal experience, or a knowledge of the observations of others, and remarks that he has met with only one example of carcinoma of the penis which he thought had this origin.

Following up this subject, Dr. Paul F. Mundé addressed letters to, and received answers from, Satterthwaite, Welsh, Weir, and Wyeth, of New York; Czerny, of Heidelberg; and Billroth, of Vienna, which may be found in the *New York Medical Journal* for October 27, and the outcome of which is that there is not a single authenticated case on record of inoculation of the penis by a carcinoma of the uterus. Such an occurrence is barely possible under favorable circumstances, and is worthy of further investigation. However this may be, there is no evidence whatever of the heteroinoculability of malignant growths in the human subject.

THE RADICAL CURE OF UMBILICAL HERNIA.

IN the *British Medical Journal*, for December 8th, MR. LAWSON TAIT makes a preliminary note of his practice in exomphalus. In eleven cases he has opened the sac, freed all adhesions, reduced the intestine, removed redundant and irreducible omentum, pared the edges of the ring, and stitched them together with a permanent, continuous silk thread. All of the patients recovered, and in three, in which the subsequent history could be followed, the cure was assured after eleven, eight, and five years, respectively.

This operation, thus briefly described, is well worthy of general acceptance. The superstitions regarding opening the cavity of the peritoneum have disappeared, and the danger on this score may be disregarded. What is known as the subcutaneous operation of closing the ring is open to the very serious objection of the danger of wounding the small loop of the intestine which is almost invariably present in the sac. Even if this were not the case, the omentum, which is, as a rule, adherent to the inner surface of the sac, is an insuperable bar to the permanent closure of the ring.

BACKBITING—A SERMON.

"SPEAK as you think, be what you are, pay your debts of all kinds," says Emerson; but the sage of Concord had the gift of an amiable spirit which could see no ill in his neighbors, and had only kindly feelings for all mankind. Thus provided, any one may be trusted to have his say, when the spirit of talk moves him. Most of mankind, however, need to be muzzled, or, if permitted to utter their thoughts, should have license only for the matured expression of kindly feelings.

Of all men, physicians owe it to themselves to be considerate of each other. The doctor lives before the public eye, and is the subject of unstinted praise by friends, of unlimited blame by enemies. So often must the termination of a case be adverse to the hopes and wishes of the friends and relatives, that the physician frequently receives a larger measure of suspicion and distrust, if not actual blame, than he does of just appreciation. Indeed, the best and wisest men in the medical profession, although bound to their patients by the closest ties, and rated amongst the highest for integrity, learning, and skill, are sometimes cruelly slandered, and by those from whom they have a right to expect the warmest gratitude. When the yearly balance is struck between benefits received and injuries borne, there may be slim reasons for congratulation. Should not doctors, therefore, be tolerant of each other, forbearing, and generous?

Personal qualities and peculiarities, habits, professional aims and methods, are criticised by a doctor's friends, and condemned by his enemies. The avenues to professional distinctions are beset with thorns and pit-falls; the distinctions are few and of small relative value; the competition is keen, and the spirit of it, if outwardly decorous, is oftentimes beneath marked by rancor. The candidate for place is lucky, indeed, if he comes out of a contest with a whole reputation. If a man succeed in creating an excellent position by severe and unremitting attention to all the details of a medical career, those less fortunate, be-

cause less active, are too apt to attribute the success to unworthy methods, and the failures to the exercise of unpopular virtues.

If no purpose is to be served by it, evil-speaking is indulged in, sometimes, for the mere pleasure that it affords. There are some people who always feel badly when a colleague does a creditable thing, and are correspondingly pleased when he comes to grief in any way. When failure occurs, or some evil act comes to light, under a hypocritical pretence of sorrow lurks an unctuous satisfaction. The best of us, poor creatures that we are, do not have that regret for the deep misfortunes of our friends that we give to the smallest disappointment of our own.

Probably, after all, the greatest wrongs done to our medical friends are perpetrated in the trivialities of ordinary gossip. We are so fond of a joke that tells against a neighbor—that does not hurt him too much, that makes him but a little ridiculous and that lowers him somewhat from our professional and social eminence. We are loath to do him any hurt, but would gladly take down his conceit a little, strictly for his own good. But a joke may contain a stigma that lasts. Give a dog a bad name, and hang him, is an old adage. Make a doctor ridiculous, and his best friends feel a little self-apprehensive in his company. What is fun to the boys is death to the frogs.

At this resolution-forming period it were well to have done with evil-speaking of our fellows. The remedy for the evil of backbiting is older than our oldest medical work; it is contained in some formula of the most ancient religions; it is the often-quoted but too-little practised Golden Rule, expressed in its most compendious form, "Do as we would be done by."

AN ENGLISHMAN'S OPINION OF SOME AMERICAN WORK.

In a recent "Address on the place of Literature in Medicine," Dr. Cullingworth, of Manchester, referred to two monographs as specimens of that kind of literary workmanship of the first order. One of these is Dr. Bowditch's paper on "Diaphragmatic Hernia," and the other is Dr. Read's "History and Treatment of Placenta Prævia."

Dr. Bowditch is too well known to require any explanations regarding his history and place in the medical profession. Dr. Cullingworth is mistaken, however, in assigning Dr. Read to Philadelphia, and we observe that some of our contemporaries repeat his error. His essay was, it is true, published in that city, but Dr. Read is a resident of Boston. We learn from *The Medical Register for New England*, that he was graduated A.B. from Dartmouth in 1839, and M.D. from Harvard College, in 1842. Beside this essay on "Placenta Prævia," which Dr. Cullingworth regards as a model of its kind, Dr. Read has also contributed to The American Journal of the Medical Sciences for 1858, a paper on "The Influence of the Placenta on the Development of the Uterus during Pregnancy," and in the same journal for 1861, another paper "On the Formation of Knots in the Umbilical Cord." Notwithstanding the good work which Dr. Read has done, he is probably less known to the American medical public than some far inferior writers. Now, that he is honored by foreign notice, his colleagues on this side of the water will begin to appreciate his merit. Otherwise he had gone to his grave "Unwept, unhonored, and unsung."

In further illustration of the place which the profession of this country is surely attaining in medical literature, we may mention that Dr. Cullingworth quotes freely from Dr. Billings's London International Congress address, which he designates as "admirable."

LUXATIONS OCCURRING SUDDENLY DURING THE COURSE OF GRAVE FEVERS.

At a recent meeting of the Société de Chirurgie de Paris, recorded in the *Gazette Hebdomadaire*, No. 48, M. Verneuil made an important addition to the literature of pathological dislocations, when he narrated seven examples of these accidents occurring during the course of acute articular rheumatism. In addition to his own personal observations, he reported one case from the practice of Marjolin, and in the discussion which followed, Delens added one case, and Lannelongue described two cases which occurred during the progress of typhoid fever and traumatic meningitis.

The first case of Verneuil, which may serve as a type of the remainder, was that of a girl, ten years of age, who was attacked with acute general rheumatism, which soon became localized in the left lower extremity, during convalescence from typhoid fever. The temperature was high, the pain intolerable, and the member assumed a vicious position. On the twelfth day, the suffering suddenly ceased, the limb was shortened, flexed, adducted, and rotated inwards, and the head of the femur rested on the dorsum of the ilium. Reduction was speedily effected under chloroform, and the limb was secured in Bonnet's splint.

Of the eleven cases, the hip was luxated in nine, and the knee was subluxated in two. In eight examples, the accident occurred during the course of rheumatism, in two during the course of typhoid fever, and in one during the course of traumatic meningitis. Eight of the patients were children of from five to eight years of age, and in not a single one was there any evidence of inflammatory changes

in the articular extremities of the bones. The accident is caused by the sudden and vigorous contraction of the flexors of the joints, their antagonists, the extensors, being paralyzed and atrophied, and its occurrence is favored by the flexed state of the joints, and, possibly, by the loss of resistance on the part of the ligaments from intraarticular effusion. In the way of prevention, the flexion of the joint should be overcome and the limb be immobilized. After the luxation has taken place, the tendency to recurrence should be obviated after reduction, by massage, electricity, and other measures calculated to restore the tonicity of the wasted muscles.

SOCIETY PROCEEDINGS.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 3, 1884.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D., IN THE CHAIR.

IMMEDIATELY after the reading of the minutes the polls were opened for the

ANNUAL ELECTION OF OFFICERS.

The result was as follows:

Vice-President.—Dr. Robert F. Weir.

Member of the Board of Trustees.—Dr. C. R. Agnew.

Treasurer of the Board of Trustees.—Dr. F. A. Castle.

Member of the Committee on Admission.—Dr. Daniel Lewis.

Member of the Committee on Ethics.—Dr. C. D. Varley.

Member of the Committee on Education.—Dr. W. G. Wylie.

Member of the Committee on Library.—Dr. A. Jacobi.

THE REPORT OF THE TREASURER.

Dr. W. F. Cushman showed that during the year ending December 15, 1883, the receipts had been $4249.57, and the disbursements $4429.78, leaving a deficit of $179.79, which had been covered by a temporary loan. In the

REPORT OF THE BOARD OF TRUSTEES,

the Academy was congratulated on the character of the papers presented during the year, and the scientific discussions which they had elicited, and on the condition of the society's building and library. There had been, too, a marked increase in the number of readers, and the library and reading-rooms were frequently visited, not only by physicians, but also by lawyers and laymen from all parts of the State. The report was signed by Dr. G. M. Smith, Secretary.

THE REPORT OF THE RECORDING SECRETARY

showed that during the year twenty new Resident Fellows had been elected, while the deaths embraced seven Resident Fellows, one Non-resident Fellow, and one Honorary Fellow. There had been one resignation. The roll of the Academy now consisted of 380 Resident Fellows, 18 Non-resident Fellows, 43 Corresponding Fellows, and 6 Honorary Fellows. Total, 447.

The reports of the Corresponding and Statistical Secretaries, and of the Committees on Admission, Ethics, and Education were read by title, and the

REPORT OF THE LIBRARY COMMITTEE

was read in full. It stated that the number of visitors during the year was 4699, and the number of blanks filled in the circulating department 395. The donations during the year had consisted of 721 bound volumes, and 1839 pamphlets; and 7349 copies of medical journals had been received. The estimates for the ensuing year were as follows:

For salaries, ...	$1212 00
For journals, ...	650 00
For incidental expenses, . . .	138 00
Total, ...	$2000 00

DR. FRANCKE H. BOSWORTH then presented a

PORTRAIT OF THE LATE PROF. JAMES R. WOOD,

on behalf of a number of his old students. In the course of his address, he stated that it was not as the eminent surgeon, nor as the great clinical teacher, that he wished to speak of Dr. Wood to-night, but rather as a beloved and revered preceptor; and he thought that it was in all probability the recollection of his own early struggles that made Dr. Wood so eager to aid his students in every possible way in preparing them for their future work, and making positions for themselves. No one could come in contact with him without feeling his magnetic influence, and it was his wonderful enthusiasm for teaching, he thought, which was the secret of his extraordinary success in this field. The portrait had been painted by the well-known artist, Mr. Thomas Hicks, and its fidelity would speak for itself. No more fitting place could be found for this work than the Academy of Medicine, and it was the desire of those contributing it that it should always remain upon its walls as the memorial of one who was not only a great surgeon, and a great clinical teacher, but, above all, one who was the friend of the medical student.

THE PRESIDENT accepted the gift on behalf of the Academy in some appropriate remarks, and then introduced DR. FREDERICK S. DENNIS, who read a

MEMOIR OF DR. WOOD.

In the beginning of it, he said that Dr. Wood was personally identified with the Academy of Medicine more closely than with any other society. To it he had made his most valuable scientific contributions, and on its platform he had delivered his last public address. Dr. Dennis gave a detailed account of his early years, and spoke of the taste for anatomy which he developed even in his youth. He was accustomed to spend his summers in hunting and fishing on Long Island, and it was a favorite amusement of his to prepare and mount the skeletons of small animals and fish; so that the sports of the boy, he believed, really determined the career of the man.

He then proceeded to speak of him more particularly in the three great departments of his professional labor; as founder, clinical teacher, and surgeon, and said that his work, both for quality and extent, took high position among the best. He showed him to have been a great

politician, but one of the highest character, who never could be induced to accept any office whatever; and gave a history of the means by which he obtained control of the public institutions of the city, from which resulted the establishment of Bellevue Hospital on its present basis, and the foundation of Bellevue Hospital Medical College. One of the earliest objects which he had in view was the formation of the anatomical and pathological collection which has since become so famous, and for the enrichment of which he constantly offered prizes for the best mounted specimens. This museum he presented to the Commissioners of Charities and Correction in 1856, and up to the time of his death it was his aim and ambition to make it as complete as possible in every department. Of it, Dr. Willard Parker had remarked that it was the greatest monument ever erected to any surgeon in this country, and the London *Lancet* had paid the highest tributes to its value.

The attendance at Dr. Wood's surgical clinics at Bellevue Hospital often reached nearly one thousand individuals, and the present system adopted in almost all the medical colleges of combining much more largely than formerly clinical with didactic teaching, owes much to his efforts in this direction. In the treatment of surgical cases the three points on which he laid most stress were rest, cleanliness, and free drainage. Surgical cleanliness was a *sine qua non* on which he always insisted, and which he carried out in the minutest detail in practice. In his operations he never used sponges, but substituted for them pieces of lint which had been dipped in a solution of carbolic acid, and which were thrown away after being used once.

Having spoken of his contributions to surgical literature, Dr. Dennis went on to glance over the long list of his operations, and the many triumphs that he won in almost untried fields. He mentioned particularly his success in periosteal surgery, in operations upon the arteries for aneurisms and other pathological conditions, and in the surgery of the nerves. Up to the year 1879 he had performed nearly one-fourth of all the operations that had been ever done in the world for the relief of tic douloureux by the removal of Meckel's ganglion. His reputation was an international one, and at the German Medical Congress, in 1877, the distinguished Langenbeck had exhibited the celebrated jaw-bone of the Wood Collection, reproduced from the periosteum, with the remark that there was not another such specimen in the whole of Europe. The *Lancet* had also sung his praises as one of the pioneers of periosteal surgery. In genito-urinary and abdominal surgery, in addition, he was a very successful operator, and the last occasion when he spoke in any society was when he made his reply before the Academy of Medicine to Dr. Sims's paper on gunshot injuries of the abdomen. The latter had advocated the opening of the peritoneal cavity as in ovariotomy, but he had opposed this on the ground that in ovariotomy the patient was prepared by preliminary treatment, and there was no shock till after the operation, while in gunshot injuries of the abdomen the patient was already in a state of shock, and the case was very different. He did not perform ovariotomy himself, as he believed it was an operation which should be left to those who had made a special study of the details of the procedure. One of the last operations which he witnessed was one performed at the Woman's Hospital by Dr. Emmet.

As an operator he was exceedingly bold and dexterous, and the rapidity with which he sometimes operated was remarkable. He had once amputated a thigh in nine seconds, and before the discovery of anæsthetics this celerity was often of the greatest practical importance.

Dr. Dennis then spoke of his labors, in connection with Drs. Payne and Parker, in securing the passage of the dissecting bill now in force, which was only accomplished after four years of hard work; and in establishing, with the assistance of Drs. Flint and Smith, the noble training school for nurses at Bellevue Hospital. In conclusion, he quoted a private letter from Professor Gross, in which he said that in Dr. Wood's death the profession had lost one of its most beloved members, and one of its brightest ornaments.

At the conclusion of Dr. Dennis's paper, DR. T. ADDIS EMMET read a

MEMOIR OF DR. J. MARION SIMS.

Having spoken of his early career, and the papers which introduced to the profession his treatment of trismus nascentium, his vaginal speculum, the use of silver wire sutures, and his operation for vesico-vaginal fistula, he gave an interesting account of his first introduction to Dr. Sims, soon after the latter removed to New York, in 1853. In October of that year he received his first patient from Dr. Mott, the case being a very bad one of vesico-vaginal fistula, with the cervix uteri turned into the bladder. Dr. Emmet then gave a somewhat detailed narration of the organization and subsequent history of the Woman's Hospital, of which Dr. Sims was the originator. He had, however, none of the qualities of an organizer, and the work was thus accomplished in great part with the assistance of others. Among those whose aid was most efficient were Dr. Barker, who possessed great influence with the ladies constituting the Board of Managers, the late Dr. Francis, Mrs. T. C. Doremus, and Messrs. Beckman and Benedict.

He spoke of the triumphs which he achieved at the hospital, and told how his enthusiasm and zeal were sometimes repressed by the more cautious consulting physicians and surgeons, Drs. Francis, Mott, and Stevens. He was by nature a surgeon. He was one of the most dexterous operators he had ever seen, and his ingenuity and fertility of resource were wonderful. He was in no sense a plodder, but was all the time striking out in some new path. Dr. Emmet then gave a synopsis of the work that he accomplished, and remarked that up to the present time the human race had not been benefited to the same extent by any surgical instrument as by Sims's speculum. It had opened up an immense field, in which it had hitherto been impossible to accomplish anything whatever. Among the other instruments and procedures which he had devised or adapted, and which were of the highest service to the gynecologist, were the perineal retractor, the uterine probe, the uterine tenaculum, the use of glycerine and of spongetents, the proper tamponing of the vagina, the probang sponge-holder, the block-tin pessary, and the operation upon the anterior wall of the vagina for procidentia and prolapse of the uterus. While sojourning in Europe, he wrote his *Clinical Notes on Uterine Surgery*, which created such a profound impression throughout the civilized world, and yet which, he himself said, was "simply a voice from the Woman's Hospital." Although this

work was open to many criticisms, its appearance had constituted the turning-point in modern gynecology, or, more strictly, in American gynecology, of which he was the father. It was greatly to be regretted that he had not subsequently revised it, and produced a more systematic and accurate work.

Having spoken of his work in connection with the Anglo-American Ambulance Corps in the Franco-Prussian War, of which he was the head, he alluded to the honors which were showered upon him from every part of the world for his achievements in the field of uterine surgery, and concluded with an eloquent tribute to the noble qualities of his devoted wife, who was the daughter of his old preceptor, Dr. Jones, of South Carolina.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, January 3, 1884.

THE PRESIDENT, R. A. CLEEMAN, M.D., IN THE CHAIR.

BATTEY'S OPERATION.

DR. E. E. MONTGOMERY corrected a statement made in the report of the case of ovariotomy narrated by him at the meeting of December 6, 1883. *Silk ligatures*, not catgut, were used to tie the pedicles.

The convalescence of the patient had been very satisfactory. The temperature did not rise above 99° F. In performing this operation no antiseptic was used; all instruments, sponges, etc., were washed in boiling water, and boiled water was used in washing the wound and abdominal cavity. The mental condition of the patient was such that she was kept constantly under mechanical restraint, and on one occasion, when she had been left alone for a few minutes, she tore all the dressings off of the wound, and at the next visit it was found bare, but no bad results followed. The sutures were removed on the eighth day. Some pain in the lower part of the abdomen and slight fever commenced on the twenty-fifth day, but she has since again improved. Her mental condition is at the present better than it had been for a year before the operation, and she can now converse rationally.

SEPTICÆMIA AFTER ABORTION.

DR. W. H. PARISH reported the following case. A young woman, twenty years of age, came into the Philadelphia Hospital in the finishing stages of an abortion which had been coming on for some days. The cause was unknown, but was probably instrumental. At the time I first saw her, three days after her admission, her temperature was 103° to 104° F., and pulse 150. She had had a chill before admission; her abdomen was distended and tender, and the uterus was very sensitive. The right parotid gland was swollen and painful. It continued to enlarge, and, fearing septicæmia, he gave fifty grains of quinine daily, by rectum, as the stomach was too irritable to retain it. One ounce of whiskey was given by the mouth every hour, day and night. A small quantity of morphia was given to relieve the abdominal tenderness. The pulse and temperature fell rapidly, but the gland continued to be swollen and painful; it was quite hard, and discolored. There were no chills now; but fearing the presence of pus, he made an opening by Hilton's method, incising the skin, and using a director to tear through the gland tissue, which was enlarged by passing a pair of forceps, closed, along the groove of the director, and withdrawing them opened. This opening gave exit to two or three fluidrachms of pus. The gland now improved in appearance, but another abscess opened behind the gland and discharged freely. The two abscesses did not communicate. The patient is now convalescent.

The following were then elected

OFFICERS FOR 1884:

President.—Richard A. Cleeman, M.D.
Vice-Presidents.—B. F. Baer, M.D., W. T. Taylor, M.D.
Secretary.—W. H. H. Githens, M.D.
Treasurer.—Alfred Whelen, M.D.
Librarian and Curator.—T. Hewson Bradford, M.D.
Councillors.—R. P. Harris, M.D., Lewis D. Harlow, M.D., Wm. Goodell, M.D., T. M. Drysdale, M.D.
Publication Committee.—John H. Packard, M.D., James V. Ingham, M.D., Elliott Richardson, M.D., B. F. Baer, M.D.

TORONTO MEDICAL SOCIETY.

Stated Meeting, December 6, 1883.

THE PRESIDENT, I. E. GRAHAM, M.D., L.R.C.P. LOND., IN THE CHAIR.

(Specially reported for THE MEDICAL NEWS.)

DR. MACPHEDRAN presented the larynx, and related the case of a child, aged four, that died from

SPASMODIC LARYNGITIS.

He had suffered from frequent attacks of croup from infancy; otherwise perfectly healthy. Two years ago had a severe attack, and the physician in attendance ordered alum as an emetic, and gave a warm bath. The child was very ill for three days. Since then the same treatment had been followed in each attack, and always with satisfactory results.

On the evening of October 15th, he was apparently perfectly well, suffering from no hoarseness or other signs of cold. At 11.30 P.M. was suddenly awakened by severe dyspnœa, with stridulous breathing. Free emesis was produced with alum, and he was put into a warm bath, after which he was rolled in blankets, but without any relief. The dyspnœa gradually increased in severity, and he died at 2.30, about three hours from the commencement of the attack. The doctor did not see him till about fifteen minutes after death.

Autopsy (twelve hours after death).—Lungs much congested with venous blood; heart normal, left side contracted and empty, the right dilated and filled with venous blood. The mucous membrane of the larynx and trachea was somewhat livid, and there was slight thickening above the vocal cords.

This was a case, doubtless, of subacute catarrhal inflammation of the larynx, in which the irritation caused tonic spasm of the glottis. Morell Mackenzie believes that spasm plays only a secondary part in these cases, the chief cause being a collection of inspissated mucus deposited on the vocal cords during sleep, narrowing the chink of the glottis to such an extent as to impede the free ingress and egress of air; then spasm is excited.

DR. HOLMES recommended turpeth mineral as an emetic in these cases.

DR. CAMERON thought that it would be advisable in such cases to resort to tracheotomy and artificial respiration, even if the case were not seen until a few minutes after death. He had used turpeth mineral; in one case it failed to produce vomiting, but purged the child out of the world.

DR. MACPHEDRAN had also had a fatal result with this emetic. (For full report see THE MEDICAL NEWS, Dec. 22, 1883.)

THE PRESIDENT, DR. GRAHAM, reported the following peculiar

CASES OF EPILEPSY,

showing the first case: H. S., æt. 12, female, came under my observation in October, 1883. Patient was in fair health until about two years ago, when the parents noticed the epileptic attacks. It is probable, however, that she had been previously subject to the disease, but that, owing to the occurrence of the paroxysms at night, they had not been noticed. So far as could be judged from the description, the first seizures noticed were those of ordinary epilepsy. She was immediately placed under medical treatment, and was free from the attacks for about five months. They then returned with increased frequency and severity.

About a year ago, they changed in character. It was noticed that she had frequently spasms of the left leg. These spasms presented all the symptoms of localized epilepsy. She would first experience a pain in the popliteal space; then the limb became rigid, which condition was shortly followed by clonic spasms. The patient would retain her consciousness during the seizure. When, however, the spasm of the leg was more than usually severe, it would end in a general epileptic convulsion, with the ordinary symptoms. During the past year, the spasms have been of three types: first, and by far the most frequent, the localized epilepsy of the left leg; secondly, the spasm of the limb, followed by a general convulsion; and a third variety which occurred very rarely—general convulsion without any previous spasm of the leg. The left leg is always more or less rigid, a condition which gives the patient a very peculiar gait. The patella tendon reflex is not exaggerated on that side.

During the time when the patient was presented to the Society, two spasms of the leg occurred. The symptoms were identical with those already described.

In connection with this case, the President related the following remarkable coincidence. For the histories of the cases, he is indebted to Dr. McAlpine, of Janetville, under whose observation the patients came.

Case I.—Patrick G., æt. 66; married, and the father of a family. He has suffered from epilepsy from his youth, but of late years the attacks have been more frequent. They often occur every two or three hours for days together. He came to Dr. McAlpine on a Sunday afternoon with the following history: He went to bed as usual on the previous evening, and during the night he was awakened by a severe pain in the left shoulder. He then found that he had lost the use of his left arm. The Doctor, on examination, discovered a dislocation of the head of the left humerus backwards. Chloroform was administered, and the shoulder easily reduced.

Case II.—During the following night (Sunday), Dr. McAlpine was called to see a brother of the former patient. He was sixty-two years of age, and had also been the subject of epilepsy. He had gone to bed as usual, and was awakened about midnight with severe pain in the left shoulder. He found his left arm stiffened and useless. There was found a dislocation similar to the one in the former case. It was easily reduced without chloroform.

DR. CAMERON exhibited the brain and read the notes of the case of Mrs. G., æt. 40, married twenty-two years ago, several children, one miscarriage in early days of wedded life, children healthy; husband healthy; previous personal history discloses no ill health. Thin, spare woman; not gray or bald; marked capillary ectasia in skin of nose; no other external evidence of disease or degeneration. Eyesight has deteriorated in last two or three years. Never suffered from any ear-trouble; not subject to headaches. Pulse on admission hard, incompressible, high-pressure. Three weeks ago, patient having previously been in her usual supposed good health, was suddenly seized, while engaged in housework, with pain in the right side and back of head and neck. Soon afterwards an epileptiform seizure came on, followed by unconsciousness which persisted for several hours. When consciousness returned, complaint was made of pain in right side of head and back of head and neck and uncontrollable vomiting for forty-eight hours. Dr. R. H. Robinson, who saw her at that time, found deviation of the tongue to the right on protrusion. Patient's condition then somewhat improved, but in ten days another convulsion, accompanied with similar phenomena, occurred. Improvement seemed to follow brisk purgation. Five days later she was admitted to the hospital. She was then cyanosed and unconscious. Pupils contracted, equal, responding to the stimulus of light. Slight passive divergence of eyeballs. Respiration quick and shallow, no puffing of cheeks or lips on expiration. Pulse hard, incompressible, over 100. Muscular tonicity of right side normal; *partial* left brachial monoplegia. Skin reflexes slightly diminished; tendon reflexes also slightly diminished, certainly not exaggerated. Potassium bromide, aloes, and asafœtida administered; could swallow solid bolus better than liquids.

Next day consciousness returned; bowels had acted; passed urine, asked for utensil; could answer questions rationally. Complained of pain in right side of head and back of head and neck, and also back; could move all four limbs; grasp of left hand weaker than right; legs manifested an irresistible tendency to fall out of left side of bed; had to be pinned in. Urine laden with urates, no albumen; tongue protruded straight.

Next day, felt somewhat better; pain in head and neck persists. Ophthalmoscopic examination—kindly made by Dr. Reeve—entirely negative.

Next day still felt somewhat better; head rotated markedly to the right, any attempt to straighten it is painful. Other symptoms not changed. No marked localized tenderness in scalp. No valvular cardiac lesion. Temperature 101° Fahr. Aneurism thought to be excluded; tumor likewise; syphilitic gummata likewise; embolism probably; hemorrhage not likely, from age and sight of lesion; thrombosis of right lateral sinus, with effusion and pachymeningitis leaned to, but diagnosis not made.

Next day no change; quite rational.

Next day, coma, cyanosis, rapid breathing and pulse; death.

Post-mortem Examination (six or eight hours after death).—Brain: thin layer of blood beneath pia mater and dipping into sulci on right side, and extravasation columnar in shape, half an inch in diameter, extending through the brain substance from half an inch from cortex to the base, being two inches posterior to Sylvian fissure at base, and half an inch at upper surface. Heart, concentrically hypertrophied; no valvular lesions. Lungs somewhat emphysematous; liver healthy; kidneys small capsule adherent, cortex granular.

MR. A. H. WRIGHT presented the following notes of a case of

NEPHROTOMY FOR PYELITIS,

and exhibited the kidneys.

J. P., male, æt. 37, a shoemaker, born in Ireland, admitted to the Hospital April 27, 1883. Nothing special in family or previous history. Thinks he never had gonorrhœa, although he had two sores on penis twenty years ago. Since last September he has had "trouble with his bladder," frequency of micturition, and pain felt near end of penis. At first the pain was worse before micturition, but lately, worse at close of the act. Noticed three small blood-clots in March in chamber after voiding urine. For a short time in March and April a little blood followed urine occasionally. The pain is now very severe; felt near end of penis, especially at close of micturition. Passes water four or five times an hour during the day, and nearly as frequently at night. Unable to work during last two months. Ordered benzoic acid, biborate of sodium, and infusion of buchu.

May 3.—Stricture found in bulbo-membranous portion of urethra, admitting only No. 1 English catheter. Prostate tender per rectum, and slightly swollen. Less pain and frequency of micturition. Blisters applied to perineum. Examination of urine showed abundance of pus cells, a little albumen, specific gravity 1012, acid reaction, no casts. Endeavored after this to dilate stricture by simple dilatation, but failed. Then tried continued dilatation, commencing with a No. 1 English, which was retained three days, after which a No. 2 was used. In twelve days the stricture would only allow the passage of No. 5. Could not find calculus in bladder.

During latter part of May appeared better; had less frequency of micturition; but in June was worse again, and had occasional increase of temperature.

June 19.—Passed a Holt's dilator, intending to "rupture" stricture, but as a severe rigor ensued, it was at once withdrawn.

July 12.—Performed external urethrotomy with a guide, and allowed urine to flow through perineal opening. The stricture was cut through without difficulty. The bladder was explored easily, but was found to contain no calculus. There was abnormal condition of prostate. Bladder apparently slightly contracted. Pain much relieved by operation, and was able to retain urine about two hours; was in good spirits, as he thought his condition vastly improved.

In August it was found that pus still passed; sometimes by the perineal opening, sometimes mixed with urine, and occasionally alone, either at commencement or end of micturition. Sometimes urine appeared quite clear for a day, or a day and a half, and then a quantity of pus would pass, either alone or with the urine. At one time, after an interval of nearly two days, about an ounce of pus passed alone. Careful questioning at this time elicited the fact that there was occasional dull pain in right loin, not descending towards groin, apparently worse before the passage of pus. A careful examination on various occasions showed no certain signs of swelling in this region.

Urine examined frequently without discovering anything new; reaction always acid; some albumen, probably no more than presence of pus would account for; no casts. During this month (August) the perineal wound closed up for a few days, but again opened, and remained so during life; some urine passing through fistula and some through urethra. Occasionally had chills and increased temperature, and attacks of diarrhœa, which were generally easily controlled.

In September he seemed somewhat better, and passed less pus. Worse again at end of month. Had chills, loss of appetite, and irregular—sometimes high—temperature. Slight signs of swelling in right loin suspected.

October 15.—Percussion showed dulness limited to a space not greater than a finger-breadth, midway between last rib and crest of ilium. There appeared to be a slight swelling when two sides were carefully compared. No fluctuation could be made out.

18th.—The large needle of aspirator was introduced between last rib and ilium, six inches from spine. It passed easily into a good-sized cavity, from which seven ounces of pus escaped. Examination of urine showed no special change.

Felt rather better after use of aspirator, but in four or five days diarrhœa returned. Evacuations slightly dysenteric in character.

28th.—Nephrotomy performed with antiseptic precautions, including the spray. Patient under ether, which he took badly. Ordinary lumbar incision, commencing at last rib, three inches from spinous processes, passing downwards and slightly outwards to crest of ilium; passed through portions of latissimus dorsi, and then cut through lumbar fascia and transversalis fascia on a director; then passed finger past outer edge of quadratus lumborum. The tissue behind kidney (principally fat) was scraped away, mostly with finger, when sac came in view. This was seized with a volsellum forceps and opened freely. About six or seven ounces of pus escaped; the edges of sac were then fastened to integument on each side of superficial incision. There was very little bleeding. No vessels tied.

Patient rallied fairly well, and seemed pretty comfortable during evening. Stomach was irritable, and there was some vomiting during night. On following morning condition about same—unable to take much nourishment. At 11 A.M. commenced to sink, and remained very low notwithstanding injection of ether, hypodermically, and nutrient enemata. Died on following day, two days after operation.

Post-mortem Examination (five hours after death).—Body emaciated. Right kidney, capsule thickened and adherent to surrounding tissue; numerous adhesions, especially to ascending colon; kidney tissue partially destroyed. No pelvis could be made out. Ureters much thickened and lumen very small. Left kidney weighed ten ounces.

When this patient was first admitted, he was treated for cystitis and stricture. The stricture was very obstinate, and prevented exploration of bladder. The perineal blisters were expected to relieve the prostatitis, if any existed. The perineal section was performed for three purposes: 1st. To cure the stricture; 2d. To relieve the cystitis; 3d. To explore the bladder. It was very satisfactory for all three purposes, the only drawback being the continuance of the fistula. It was found quite easy to explore the whole of the interior of the bladder. The exploration showed the bladder to be comparatively healthy. It was not until after this that pyonephrosis was suspected, but it was extremely difficult to discover any physical signs of such in the loin. This may be partly understood by an examination of the sac, which was composed of the capsule and a very small portion of kidney substance. The sides of the pelvis were to a large extent agglutinated. The sac and its contents occupied the normal position of the kidney, and filled but little if any more space than the left kidney, which weighed ten ounces. Generally, in such cases, the pelvis and ureters are largely dilated, and form part of the sac. Under these conditions the swelling often extends beyond the median line, and can be easily detected.

As the other kidney was fairly healthy, and had evidently secreted all the urine for some time, and as the other organs were in pretty good condition, it is quite likely that earlier operative interference would have prolonged the patient's life considerably. It seems likely that the stricture was the origin of the trouble, causing first cystitis, after which the inflammation extended up the right ureter to the pelvis and substance of kidney.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, December 15, 1883.

THE PRESIDENT, WM. M. WELCH, M.D., IN THE CHAIR.

DR. ARTHUR V. MEIGS presented

PROOF THAT HUMAN MILK CONTAINS ONLY ABOUT ONE PER CENT. OF CASEIN; WITH REMARKS UPON INFANT FEEDING.

Nearly two years ago, in a paper upon "Milk Analysis," Dr. Meigs described the method he had worked out, and briefly detailed his results. The main conclusion was that human milk never contains more than about one per cent. of casein, and this observation he then claimed to be a new one, and very important, as showing how we should feed infants so unfortunate as to be deprived of their natural sustenance. A year ago or more, he delivered a lecture to the class at the Pennsylvania Hospital, which was subsequently published in THE MEDICAL NEWS of November 4, 1882, in which he described a plan of feeding deduced from the results of numerous experiments and analyses. He now offered proof that the results arrived at by the method of analysis are correct, and he then proceeded to make some suggestions about the proper method of infant feeding.

In the endeavor to find a food which shall be the best for infants who have to be hand-fed, he said, there are two considerations, either of which might be selected as the basis from which to start. In the first place, the desired goal might be attained by making trial of all sorts of foods, and these being put to the test of experience, the good would be retained and the bad gradually weeded out, until at last perhaps the most suitable would be found, and slowly introduced. On the other hand, the desired end might be attained by trying to produce a food which should be, as nearly as possible, like what nature has provided for the infant. Many trials have been made in the past by both these methods, but to the second one justice has never been done; for, if his conclusions are correct, a proper understanding of the composition of human milk, from which to start, has been wanting.

The artificial food which Dr. Meigs recommends is, upon theoretical grounds, what a food for infants should be; for in the artificial food the elements have been introduced in the same proportions as they exist in human milk. For a long time the great majority of writers upon infant diseases and diet have recommended that cows' milk should be diluted before giving it to young infants; and this, they all agree, is because it contains too much casein, which causes a curd that only infants of the strongest digestion can with safety assimilate.

The necessary data being now at hand, it is comparatively easy to construct a food which shall, at least, be more nearly what is needed than any previous one. In making such a food there are two matters to be considered: the proximate constituents must be in the same relative proportions as they are found in human milk, and they must be in a medium which shall be, as human milk is, alkaline. This latter end is easily accomplished by the use of a due amount of lime-water, and is justified by the fact that it is a matter of experience, almost universally acknowledged as true, that it is a most useful adjunct, rendering cows' milk more easy of digestion by the human stomach. The quantity of lime-water to be used should be one-fourth of the total by measure. This may seem to many persons an excessive quantity, but when it is understood that if made as ordinarily directed, by agitating water with lime and then filtering, it contains only two decigrammes of lime in each litre, it becomes plain that the use of lime-water means the administration of a great deal of water and very little solid matter.

The experiments show that the addition of lime-water alters the coagulability of the casein when experimented with, whatever may take place in the stomach. Whatever may be the value of these artificial experiments, the great reason for the use of lime-water is that experience has found it good.

So far as bringing the other proximate constituents to like proportions with those in human milk, the first step must be so to dilute with water as to get the desired quantity of casein; the fat and sugar can be increased by the use of the necessary quantities of cream and commercial milk-sugar. Taking the averages of cream and good city milk, it will be found by calculation that if there be mixed together ten cubic centimetres of cream, five cubic centimetres of milk, ten cubic centimetres of lime-water, and fifteen cubic centimetres of water, with two and two-tenths grammes of milk-sugar, the desired mixture is had.

The easiest way to prepare and use the food is as follows: there must be obtained from a reliable druggist packages of pure milk-sugar containing seventeen and

three-quarters drachms each. The contents of one package are to be dissolved in a pint of hot water, and it is best to have a bottle which will contain just one pint, as there is then no need for further measuring. The contents of one of the sugar packages are put into the bottle, and when filled with hot water the sugar soon dissolves, and it is ready for use. The dry sugar keeps indefinitely, but after it is once dissolved it sours if kept more than a day or two in warm weather; it is understood, therefore, that the sugar-water must be kept in a cool place, and if it should at any time become sour, as is easily discovered if it is smelled and tasted, it should be thrown out, and after the bottle has been carefully washed with boiling water, the contents of a fresh package dissolved. A milkman must be found who will serve every day fresh, good milk and cream. By good milk is meant ordinary milk, such as is easily procured in most cities, and not rich Jersey milk; and in the same way the cream should be such as is ordinarily used in tea and coffee, and not the very rich cream of fancy cattle. The reason that ordinary milk and cream are recommended, is because they are within the reach of almost every one. When the child is to be fed, the nurse should mix together two tablespoonfuls of cream, one of milk, two of lime-water, and three of the sugar-water, and then as soon as the mixture has been warmed it may be poured into the bottle and the food is ready for use. If the infant is healthy, this quantity will not satisfy it after the first few weeks, and then double the quantity must be prepared for each feeding.. Twice as many tablespoonfuls of each of the ingredients must be mixed together, making sixteen tablespoonfuls (about half a pint) in all.

This food should not be given any stronger until the child is eight or nine months old at least; but if the infant is a healthy one, it may take as much of it as it wants, but always of the same strength. A robust infant will often take three pints, or even more, in each twenty-four hours. It is an easy matter for any one to learn how to make the lime-water; and it is advisable to have it made at home, for a great deal is used, and if it is made at home much trouble and expense are saved.

With regard to the propriety of increasing, from week to week, the strength of any artificial food given to infants, there has been some question. Most authorities have advised that the foods should be increased in concentration until finally the infant is given pure cow's milk. The propriety of this procedure, during the earlier months of life at any rate, is very doubtful. Although there is some reason to believe that the quantity of solid ingredients in human milk increases from month to month as lactation goes on, such an opinion should be accepted only with great caution, for it seems likely that if there is any increase in the concentration of the milk after the colostrum has once disappeared, and the nursing process has settled down into its even course, the increase is so slight that it may be disregarded. Analyses show that the milk of a woman whose child is two months old does not differ materially from that of one whose child is twelve or fifteen months old. If, then, nature has made no difference, which our means of analysis will detect, between the milk of a woman who has been nursing two months, and one who has nursed twelve, an artificial food which has been found to suit an infant of two months, should be made more concentrated only very gradually, and with careful observation of the effect upon the health of the infant. It is best, therefore, if the infant thrives and grows as it should, not to make any change in the food until after six to nine months of age have been attained.

NEWS ITEMS.

BALTIMORE.

(From our Special Correspondent.

THE NEW BIOLOGICAL LABORATORY OF THE JOHNS HOPKINS UNIVERSITY was formally opened on the evening of Wednesday, January 2d. Prof. H. N. Martin delivered an address on "Modern Physiological Laboratories: What they are and Why they are." After the address, the audience inspected the building.

PARIS.

(From our Special Correspondent.)

WIRING THE FRACTURED PATELLA.—THE MEDICAL NEWS of December 1, 1883, contains an editorial on the treatment of fractures of the patella by suture of the fragments. La Société de Chirurgie de Paris has recently had this question up for discussion, and a brief *résumé* of the opinions expressed by the surgeons of the French capital on this subject will be of interest.

Some months ago, M. Beauregard, of Havre, presented to the Society a case upon which he had performed osseous suture of a fracture of the patella, one day after the receipt of the injury. Success was not complete, and M. CHAUVAL, who was requested to make a report on the case, did not express himself as entirely in favor of the operation. M. Chauval has collected forty-three analogous cases, of which three died, and amputation had to be resorted to in one. In thirty-three cases, the results were good in twenty-eight, bad in five. Atrophy and weakness of the limb, after the operation, are the rule; fibrous union is more usual, osseous union being the exception. M. Chauval thinks that in case of old fracture of the patella, with functional weakness of the limb, osseous suture is a useful operation, and should be resorted to; in recent fractures it should be solely reserved for those cases in which coaptation of the fragments is absolutely impossible by any other means. He states that one is not likely to die from a fracture of the patella, while an arthrotomy may be fatal, which should render the surgeon cautious. If, however, the operation is performed, every antiseptic precaution should be rigorously observed, and the limb should be placed in an immovable apparatus, and retained there for a month.

M. LUCAS-CHAMPIONNIÈRE referred to Lister's seven cases, and thought that immediate osseous suture in fracture of the patella was a good operation when performed with antiseptic precautions. He said that the statistics of M. Chauval were made up of dissimilar cases, taken from several surgeons, and that Mr. Lister's results should not be compared with those of inexperienced surgeons, who have failed where the surgeon of London has succeeded.

M. L. G. RICHELOT said that the main object to be

sought for in treating fractures of the patella, was to assure a useful limb; but loss of function does not depend on the separation of the fragments alone, but also on atrophy of the rectus femoris, which frequently occurs in fracture of the patella. There are patients who have recovered from the fracture itself, there being no separation of the fragments, but who cannot walk because of an atrophied biceps femoris. Others, again, walk well, in spite of a separation of six, eight, or ten centimetres or more, because this muscle is not atrophied. In the former it is not suture of the separated fragments that is needed, but electrization of the biceps. Admitting, then, that antiseptic arthrotomy is a good operation, it is necessary, before performing it, to be assured that it is really demanded, and only after having ascertained that the biceps is not atrophied; for union of the fragments will be of no avail if the muscle inserted into the upper fragment is powerless.

M. GILETTE had had two cases of suture of the fragments, one being a compound fracture, the other an old fracture with troubles of locomotion, which none of the ordinary means could relieve. He entirely adopted the views of M. Richelot as to the value of functional activity of the biceps.

M. VERNEUIL absolutely rejected the operation of suture of the fragments; he considered it as more dangerous than the affection for which it was performed. Where there is no wound, two plates of plaster of Paris, held together by a caoutchouc tube, suffice to hold the fragments in position, the limb being placed in a gutter; when the fracture is compound, the same apparatus, held by a band around the whole limb, and the gutter are sufficient for treatment. He agrees with M. Richelot, that functional impotence of the limb is due especially to paralysis of the biceps. Several cases of this nature have been reported by M. L. H. Petit, and there can be no doubt as to the facts. (The cases alluded to by M. Verneuil were published in *L'Union Médicale*, Nov. 29 and Dec. 1, 1883, Nos. 169 and 170.)

MM. FORGET and LABBÉ fully agreed with M. Verneuil. MM. LE FORT and DEPRÈS protested, with M. Verneuil, against antiseptic arthrotomy and osseous suture in these cases.

M. TRÉLAT thought that the operation should never be performed in recent operations; that an indication for it might exist in certain rebellious cases which resisted all treatment, but that he had not yet encountered any. However, he did not absolutely reject the operation in old cases.

M. LARGER presented a patient who had sustained fracture of the patella four times, twice on each side. The separation amounted to one and one-sixth inches on the right side, and to more than four and two-thirds inches on the left; nevertheless the patient walked very well, as the muscles are sound, which confirms the views of MM. Verneuil and Richelot. In certain cases, as reported by M. Richelot, the movements of the limb are preserved in spite of atrophy of the biceps and separation of the fragments, when the ligaments uniting the two vasti to the lower fragment are not ruptured. M. Picqué has published cases confirmatory of this opinion in *L'Union Médicale*, Dec. 4, 1883, No. 171. M. Henriot has also published in the same journal, Dec. 9, No. 174, another and more curious case. The patient had a fracture of the patella, without separation of the fragments, and he could not walk because the biceps was atrophied. Electricity restored the muscle, which then caused an elongation of the callus, as yet but little solid, and a separation of the fragments of about three and one-sixth inches. Nevertheless the solidity of the limb was much greater than before the separation, on account of muscular atrophy, and the patient walked better than before the separation.

M. Pozzi has very recently presented to the Société de Chirurgie, an insane patient upon whom he has practised suture of the fragments with success. M. Pozzi is a partisan, generally, of suture in recent fractures, but in this case he did it through necessity, on account of the restlessness of the patient.

The Société de Chirurgie is not, then, favorable to suture of the fragments in the treatment of old or recent fractures of the patella.

COLLEGE OF PHYSICIANS OF PHILADELPHIA—ANNUAL MEETING AND ELECTION OF OFFICERS.—The annual meeting of the College of Physicians was held January 2, the President, Dr. Alfred Stillé, in the Chair. The President read his annual address, which was a review of the work of the past year and an historical retrospect of the life of the college.

The result of the balloting for officers and standing committees for the year 1884 was as follows:

President.—Dr. Samuel Lewis.

Vice-President.—Dr. J. M. DaCosta.

Secretary.—Dr. Richard A. Cleeman.

Treasurer.—Dr. Charles Stewart Wursts.

Honorary Librarian.—Dr. J. H. Hutchinson.

Recorder.—Dr. J. Ewing Mears.

Censors.—Drs. Lewis Rodman, Edward Hartshorne, Wm. Goodell, and Alfred Stillé.

Councillors.—(To serve until January, 1887.) Drs. S. W. Gross and James C. Wilson.

Committee on Publication.—Drs. James H. Hutchinson, Robert P. Harris, and A. V. Meigs.

Library Committee.—Drs. S. Lewis, Walter F. Atlee, I. Minis Hays, S. W. Gross, and Morris Longstreth.

Committee on Mütter Museum.—Drs. Wm. Hunt, S. Weir Mitchell, and John H. Brinton.

Hall Committee.—Drs. Edward Hartshorne, Lewis Rodman, T. H. Bache, W. S. Forbes, and H. Y. Evans.

Committee on Lectures.—Drs. Samuel D. Gross, Joseph Leidy, William Goodell, William F. Norris, and John H. Packard.

Committee on the Directory for Nurses.—Drs. W. W. Keene, A. H. Smith, and Wharton Sinkler.

PHILADELPHIA COUNTY MEDICAL SOCIETY'S ANNUAL MEETING.—The annual meeting of the Philadelphia County Medical Society was held on January 2d in the Hall of the College of Physicians—the President, Dr. William M. Welch, in the chair. Reports of the Standing Committees and of officers were received and filed. The following officers were then elected to serve during the ensuing year:

President.—Dr. Wm. M. Welch.

Vice-Presidents.—Drs. Wm. S. Forbes and S. R. Knight.

Recording and Reporting Secretary.—Dr. Henry Leffmann.

Corresponding Secretary.—Dr. M. S. French.
Treasurer.—Dr. L. K. Baldwin.
Censor.—Dr. H. St. Clair Ash.

Two female physicians were applicants for membership, but were defeated, receiving only one-third of the total vote cast.

THE BOSTON DIRECTORY FOR NURSES.—It is stated that the net profits of this institution for the last year were $1200. This handsome sum is devoted to the use of the library of the Boston Medical Library Association.

CONDITIONAL BEQUEST TO HARVARD UNIVERSITY.—The will of the late Dr. Calvin Ellis contains a conditional bequest of $50,000 to Harvard College for the establishment of scholarships. If certain legatees mentioned in the will die without issue, the bequest is to take effect.

ARMY MEDICAL MUSEUM.—DR. JOHN S. BILLINGS has been placed in charge of the Army Medical Museum. This position will not interfere with his duties in connection with the Library of the Surgeon-General's office.

WOMEN STUDENTS AT THE PHILADELPHIA HOSPITAL.—There are about fifteen students at the Woman's Medical College in Philadelphia, fitting themselves as medical missionaries in Asia and elsewhere. Three of them, we understand, attended last Saturday's medical clinic at Blockley—the only women among about one hundred and fifty young men. The lecturer was late, and the class, in their impatience and enforced idleness, began some noisy demonstration, directed, evidently, to the delinquent teacher, but later apparently intended for the women present, not so much in the way of serious insult as of playful banter. Miss A. M. Fielde, one of their number—one of the most widely known and eminent missionaries in China—arose on the inspiration of the moment and amidst instant and most respectful silence, spoke as follows: "Gentlemen: I have been for eighteen years a missionary in China. The Chinese have no medical science, and superstitious rites are chiefly relied on in the treatment of disease. *All* the people are in need of medical aid, but the *women* are the *neediest*. A Chinese woman would under no circumstances go to a male physician for the treatment of any disease peculiar to her sex. She would be prevented by her own womanly delicacy and by all the notions of modesty held by those around her. She would suffer lifelong agony rather than violate her sense of propriety. Her father, her brothers, and her husband would even let her die rather than allow her to be treated by a male physician. Full of sorrow for the sufferings of these women, I have been looking in Christian America to see what hope of help for them might be here. I have been glad to find that in some of our great medical schools earnest and self-sacrificing women are fitting themselves for a work of mercy in Asia and other lands. Unless such women learn to do such work well there is no physical salvation for those afflicted ones. And in behalf of those women, who have no medical care while they so sorely need it, I ask from you the courtesy of gentlemen toward ladies who are studying medicine in Philadelphia." The whole class responded to her earnest address with a cheer, and one of their number, rising, assured the ladies that they had no intention to annoy them. Evidently a new aspect of the case had been presented to many of them, and one which claimed their respect and sympathy.

DR. WILLARD PARKER, of New York, whose condition has been unchanged for several weeks, at last accounts was resting more easily. His great age and the long siege of sickness through which he has passed render his recovery improbable. He may linger an indefinite time; and his death may be expected at any moment.

THE BELLEVUE HOSPITAL TRAINING SCHOOL FOR NURSES.—The Society of the Training School for Nurses attached to Bellevue Hospital held its eleventh annual commencement last Tuesday evening, and twenty-seven young women received diplomas, after which an address was made by Dr. T. Gaillard Thomas. The annual report stated that the school was opened in 1873 by thirteen women, to whom was intrusted the nursing of four wards in Bellevue Hospital. It now numbers sixty-four pupils, and has charge of 258 beds in fourteen medical and surgical wards, the Sturgis and Marquand Pavilions, and the Emergency Hospital attached to Bellevue. The school also nursed 125 private cases last year. Since its opening 105 nurses have been graduated, of whom 25 are engaged in hospital work and 137 in private nursing. There were 813 calls for private nurses last year, of which 184 had to be declined, all the nurses being engaged at the time of application. Over 300 applications for entrance to the school were received, but only forty of the applicants were accepted.

EPIDEMIC OF MEASLES IN BALTIMORE AND WASHINGTON.—An epidemic of measles at Baltimore, Md., has been officially reported to the Surgeon-General, U. S. Marine-Hospital Service. The Health Officer at Washington, D. C., also reports an epidemic of this disease in that city, and gives the total cases, up to December 31, as having been at least five thousand. Scarlet fever is also becoming quite prevalent in both cities.

YELLOW FEVER IN MEXICO.—The United States Consul at Guayamas, in a letter to the Secretary of State, dated December 12, 1883, says: "The so-called yellow fever has almost disappeared from the State; no cases now in the port, and the port authorities grant clean bills of health to vessels departing.

"In the capital of the State, Hermosillo, a few cases of a mild type are said to exist. During the past month but fourteen deaths from all diseases occurred at this port, seven of which are said to have been from the so-called yellow fever—among them were M. F. Chapin, of Maine; O. N. Funk, of Michigan, and an Englishman named F. Jolly.

"It is to be hoped that this fatal fever will never return to this coast; its ravages during the months of August, September, and October will long be remembered by the people of Sonora."

Assistant Surgeon Main, of the Marine-Hospital Service, reports, under date of December 23, that there are still scattered cases of yellow fever at Manzanillo. Mor-

tality ninety-two per cent. Quarantine has been raised on the Guadalajara road, but continues in force against vessels from the south. The "Captain of the Port" is reported as having been removed for not enforcing quarantine restrictions with sufficient vigor—his office includes that of a justice of the peace. At Acapulco the yellow fever still continues in a mild form, and has not at any time been so malignant as at other points in Mexico.

YELLOW FEVER AT HAVANA.—The yellow fever deaths at Havana for the three weeks ending December 29, 1883, are reported by Inspector Burgess to have been twenty-seven.

THE CHOLERA IN EGYPT.—The National Board of Health has information of the continuance of the cholera in Alexandria from Judge Farman, an eminent Judge of the International Tribunal of Egypt, Cairo, who says: "There are from one to three cases a day resulting in death, and many more in which the attacked recover." According to the previous history of the disease in Egypt, it will probably continue all winter, and perhaps much longer. He estimates the number of deaths from cholera during the past summer at double that given in the official reports. The United States Consul-General at Cairo reports the official estimate to be 48,000 to 50,000. After the cholera epidemic of 1865 there were isolated cases for two years. The general state of health, aside from cholera, has been bad at Alexandria. Fever in various forms has been, and still is, quite prevalent.

CONSULAR HEALTH NOTES.—The U. S. Consul at Rio reports to the State Department, that "after a lapse of twenty-four days the yellow fever has again commenced, and that the weather is very hot and dry at Rio de Janeiro."

The U. S. Consul at Buenos Ayres also reports the reappearance of yellow fever in that city.

The U. S. Consul at Calcutta states that the cholera is decreasing in India, only forty-four deaths having occurred from that disease at Calcutta during the two weeks ending November 10, 1883.

THE HUTCHINSON TESTIMONIAL.—On Thursday evening, November 29th, MR. JOHNATHAN HUTCHINSON was the guest of the past and present students of the London Hospital. About one hundred and fifty gentlemen sat down to dinner under the presidency of Sir Andrew Clark, Bart., and, during the course of the evening, Mr. Hutchinson was presented with the testimonial subscribed for by a large number of his old pupils and friends. Sir Andrew Clark, in making the presentation, delivered an eloquent and most effective address; he recalled the memories of the earlier days, when Mr. Hutchinson was an earnest, thoughtful, fervent student in the wards of the hospital which owed not a little of its renown to the world-wide fame of the surgeon who has just ceased active association with its work. Mr. Hutchinson, in reply, briefly sketched the history of his own life, and traced the development of his own mind. He insisted on the intellectual training to be obtained from a constant study of the poets of our native land, and attributed a great part of his life's successful work to the early education he received as an apprentice to a conscientious practitioner, and as a pupil in the small medical school of York, where he alone constituted the whole class in many subjects, and so enjoyed the undivided attention of his teachers.—*Brit. Med. Journ.*, December 8, 1883.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending December 29, 1883, indicate that pneumonia has greatly increased, that inflammation of the kidney, whooping-cough, diarrhœa, intermittent fever, and influenza have increased, and that rheumatism, consumption, and remittent fever have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending December 29, and since, at ten places, scarlet fever at seventeen places, and measles at seven places.

OBITUARY RECORD.—Died suddenly of angina pectoris, on January 5, at the office of Dr. H. I. Bowditch, Boston, Massachusetts, THOMAS W. PERRY, M.D., of Providence, Rhode Island, aged sixty years.

Dr. Perry was born in Hopkington, Rhode Island, and began the study of medicine with his father, a physician of repute, and afterwards studied with Dr. Bowen, of Thompson, Connecticut. Graduating from the New York University Medical School, he practised first in Putnam, Connecticut, and while there married a daughter of Lemuel H. Grosvenor, of Pomfret, Connecticut. Subsequently he removed to Central Falls, Rhode Island, and thence to Providence, where, for many years, he was in partnership with the late Dr. George Capron. During the war of the Rebellion, he was, for nine months, surgeon of the Eleventh Rhode Island Regiment.

Dr. Perry was a successful practitioner and a man of genial and kindly instincts. He had had symptoms of his fatal disease for some time, and went to Boston for the purpose of consulting Dr. Bowditch, after entering whose office he immediately expired.

——DR. JOHN A. ROGERS, of Paterson, New Jersey, died in that city on December 30th, of typhoid pneumonia, at the age of thirty-one years.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM DECEMBER 31, 1883, TO JANUARY 7, 1884.

APPEL, DANIEL M., *Captain and Assistant Surgeon.*—Having relinquished the unexpired portion of leave of absence granted by S. O. 68, Headquarters Division of the Atlantic, November 16, 1883, and reported for assignment, assigned to duty at Fort Porter, N. Y.—*Par. 2, S. O. 247, Department of the East, December* 29, 1883.

HARVARD, VALERY, *Captain and Assistant Surgeon.*—Assigned to duty in charge of office of Medical Director, Department of Texas, during the temporary absence of that officer.—*Par. 2, S. O. 164, Department of Texas, December* 31, 1883.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the News *should be addressed to the Editor, Wal[illegible] Street, Philadelphia.*

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ORIGINAL LECTURES.

A COURSE OF LECTURES ON DERMATOLOGY.

Delivered at the University of Pennsylvania during the Session of 1883-1884.

BY LOUIS A. DUHRING, M.D.,

PROFESSOR OF DERMATOLOGY IN THE UNIVERSITY.

(Reported by Henry Wile, M.D.)

LECTURE I.

ANOMALIES OF SECRETION, HYPERÆMIAS, INFLAMMATIONS.

SCIENCE is classified knowledge, and the development of any science is conditioned by improved methods of classification. In dermatology the subject of classification is important from a scientific and from a practical standpoint, and the history of this science shows that various methods of classification, from the most simple to the most complicated, have been proposed from time to time. Two of them may be alluded to. About the beginning of this century Willan grouped the affections of the skin according to the elementary lesions, as, for example, macules, vesicles, papules, pustules, etc. The classification was useful at the time, and was attractive and simple. It was, however, insufficiently comprehensive, embracing by no means all diseases, and if followed out led to confusion.

The classifications in vogue to-day have as a basis that put forth by Hebra and Rokitansky, about forty years ago, and are based upon the anatomy of the skin, the pathology of the lesions, and, to a slight extent, upon their etiology. The following classification, which will be here used, embraces nine classes.

I. Anomalies of secretion (sebaceous glands, sweat-glands); *e.g.*, seborrhœa, hyperidrosis.
II. Hyperæmias; *e.g.*, simple erythema.
III. Inflammations; *e.g.*, eczema, psoriasis, acne.
IV. Hemorrhages; *e.g.*, purpura.
V. Hypertrophies; *e.g.*, chloasma, ichthyosis.
VI. Atrophies; *e.g.*, vitiligo.
VII. New growths; *e.g.*, cancer, lupus, syphilis.
VIII. Neuroses; *e.g.*, pruritus.
IX. Parasites; vegetable, *e.g.*, tineæ; animal, *e.g.*, scabies.

CLASS I.—ANOMALIES OF SECRETION.

SEBORRHŒA may be defined to be a disease of the sebaceous glands, characterized by an excessive and abnormal secretion of sebaceous matter, forming upon the skin an oily coating, crusts, or scales. Two varieties are recognized, namely, seborrhœa oleosa and seborrhœa sicca, which may exist separately or together. Seborrhœa oleosa occurs chiefly on the face, especially the nose and forehead. In its milder form it is not an uncommon affection.

Seborrhœa sicca, or dry seborrhœa, occurs upon the chest and back, but most frequently upon the scalp, where in its milder form it gives rise to what is ordinarily known as dandruff. It consists in the formation of scales, loose or adherent, and when the process continues on the scalp the hairs become dry, fall out, and baldness ensues. Many cases of premature baldness arise from neglected seborrhœa. The same form may attack the hairy portions of the face. On the back and chest the lesions consist of dime or quarter-dollar sized, rounded or circinate spots, covered with dry or greasy scales, with a patulous condition of the ducts of the sebaceous glands. The genital region also may be affected.

Seborrhœa sicca occurs most frequently in light-haired, pale, anæmic subjects, while seborrhœa oleosa is found more in dark-haired subjects. Both forms are met with mostly in adolescence, and they are usually associated with general debility. The secretion seems to be largely under the control of the nervous system, and the pathology of the process is that of a functional derangement of the sebaceous glands with a tendency to subsequent atrophy of the glands and the skin. A microscopic examination of the secretion shows degenerated granular epithelial cells mixed with amorphous, oily, molecular débris.

When existing on the scalp the disease must be differentiated from eczema, psoriasis, and ringworm. Want of infiltration of the deeper layers of the skin, dryness, and excessive scaling are sufficient to distinguish it from the first; its diffusion over large areas, want of sharp definition at the borders, grayish or yellowish scales, on a pale or slightly hyperæmic base, would dispel all doubts as to the second, while a microscopic examination of some of the scales would render it impossible to confound it with the third. On the chest it may furthermore be mistaken for ringworm, but here the microscope would again decide. Then again on the face it may be confounded with lupus erythematosus, but in pronounced cases of the latter there is usually sharp definition of the lesions accompanied by marked infiltration and thickening, also later, by the formation of atrophic scar-tissue, all of which is absent in seborrhœa.

The treatment of seborrhœa is important; it is sometimes an easy matter, at others one of great difficulty. A general constitutional treatment is often useful, the same consisting of out-door exercise, hygiene, regulation of diet, and the administration of cod-liver oil, iron, and arsenic. The latter may be given in the following eligible form:

℞.—Liq. potassii arsenitis, . . . fʒj.
Vini ferri, ... fʒiv.
S.—One teaspoonful three times a day, to be taken in a wineglassful of water after meals.

The sulphide of calcium in doses of one-tenth to one-half grain, kept up for weeks or months, may also be mentioned, the same exerting a tonic effect upon the

sebaceous glands. Local treatment is, however, the most valuable. In seborrhœa of the scalp, when occurring in the female, it is never necessary to cut the hair. The scales must first be removed, and this may be effected by the use of water with a solution containing two parts of soft soap and one part of alcohol. Where the scales are adherent, olive oil may be employed, thoroughly saturating the part, and allowing it, covered with a thick flannel cap, to remain over night; in the morning the scales may readily be washed off with soap and hot water. After the parts are cleansed, ointments may be applied, and among the best are those of sulphur and mercury. An ointment of sublimed or precipitated sulphur, one to three drachms to the ounce of lard or vaseline, may be mentioned as one of the most useful. There may be cases in which it is ineffectual, then an ointment of white precipitate, fifteen to forty grains to the ounce of vaseline, may be used with advantage; or the red oxide of mercury, five to twenty grains to the ounce. Tarry preparations, such as oil of cade, in the strength of one or two drachms to the ounce of alcohol, are often of service. Tar ointment is also valuable. The following may be used later in the treatment:

℞.—Ol. ricini, ... fʒij.
Acidi carbolici, ... mⱪxxx.
Alcoholis, ... fʒiv.
Sig.—Apply once daily.

It is often surprising to see how much stronger remedial applications the scalp will stand than the other parts of the body.

In seborrhœa of the face and body, mercurial and sulphur ointments are the most useful; their conjoint use, of course, should be avoided. The following lotion of sulphide of zinc may be used with excellent result.

℞.—Zinci sulphatis,
Potassii sulphureti, . . . āā ʒss to ʒj.
Alcoholis, ... fʒss to fʒiij.
Aquæ rosæ, ... fʒiv.
Sig.—Apply fifteen minutes at a time with a soft sponge. Shake before using.

In this combination a chemical decomposition occurs, in which a grayish precipitate of sulphide of zinc is thrown down.

Another valuable lotion is that known as Vleminckx's solution, the formula of which is as follows:

℞.—Sulphuris sublimati, ... ℥i.
Calcis, ... ℥ss.
Aquæ, ... fʒx.
Coque ad fʒvj, filtra, adde ol. anisi q. s.
This should be used diluted, one part to four or twelve of water.

COMEDO is a disorder of the sebaceous glands characterized by yellowish or whitish pin-point and pin-head sized elevations, containing in their centre exposed blackish points. The affection is known in popular language as "grubs," "grub worms," and "blackheads." It is found mostly on the face, back of neck, chest, and back. The lesions are usually numerous, often associated with acne and sebaceous tumors, and run a chronic, sluggish course. It occurs generally in young persons between the ages of fifteen and twenty-five years, and is often dependent upon general debility, constipation, dyspepsia, and chlorosis. The skin is improperly nourished, and acquires a thick muddy complexion. The process is confined to the sebaceous glands and ducts, consisting of a distention of the follicles with sebaceous matter. Sometimes the comedo contains a small curled-up hair, sometimes a parasite known as *demodex folliculorum*, which, however, is perfectly harmless, and is in no way a cause of the disease.

The treatment should be both internal and local. Internally, tonics of iron and arsenic, and saline aperients, may be administered; and locally, hot baths, with soap and friction. The comedones should be expressed by means of a watch-key, or, where they are very numerous, a curette may be employed with advantage. Stimulating ointments and lotions should be used, especially those containing sulphur.

℞.—Sulphuris sublimati, ... ʒiij.
Adipis benz., ... ʒij.
Vaseline, ... ʒv.
Sig. Apply at night.

Vleminckx's solution,—one part to three or six of water, or a lotion containing equal parts of sulphur, glycerine, carbonate of potash, ether, and alcohol may also be applied with good results. Attention must also be directed to regulation of any functional disturbance of the stomach or bowels that may exist.

MILIUM consists in the formation of small, roundish, whitish, sebaceous, non-inflammatory elevations, situated in the skin beneath the epidermis. They are whitish or pearl-colored, rounded or acuminate; are found for the most part on the face, eyelids, and foreheads of elderly persons, and may exist in such numbers as to be disfiguring. The lesions may undergo calcification, giving rise to *cutaneous calculi*, the product being chiefly phosphate of lime. The causes of the disease are the same as those which produce comedo and cyst. Examination shows the lesions to have no apertures on the surface, and to consist of accumulations of sebaceous matter within the glands. In the matter of treatment, electrolysis with a fine needle, or incision and the application of tincture of iodine or of nitrate of silver may be resorted to.

SEBACEOUS CYST, or WEN, appears as a variously sized, firm or soft, rounded, more or less prominent tumor, having its seat in the skin, or subcutaneous connective tissue. It is found especially on the scalp, face, back, and scrotum. There are two kinds, one with open, the other with closed ducts. The course of the development is slow. In diagnosis they must be differentiated from fatty tumors, and from molluscum epitheliale. The treatment should be radical, and consist of a removal by dissection of the cyst with its wall. Hypodermic injections of tincture of iodine may also be mentioned as useful.

HYPERIDROSIS is a functional disease of the sweat-glands, consisting in an increased flow of sweat. It may be universal or local, limited or excessive, unilateral or bilateral. It is generally met with on the palms of the hands and soles of the feet. The secretion may be so excessive that it drops from the hands, thus incapaci-

tating an affected individual from engaging in any pursuit. The secretion is not accompanied by any odor.

BROMIDROSIS, also a functional disease of the sweat-glands, is characterized by more or less sweating, and a heavy or an offensive odor. This may be universal or local, generally the latter, and usually affects the axillæ, genitalia, hands, and feet. The odor may be heavy or stinking, or be likened to that of a goat or to urine; odors, as of violets or fruits, as pineapples, are also rarely thrown off from the body. Bromidrosis when highly developed is a disgusting affection; the individual becomes a burden to himself or herself, may be kept out of employment, and naturally inclines to shun all society.

CHROMIDROSIS is an affection in which the sweat is variously colored, being bluish, blackish, reddish, greenish, and yellowish. Prussian blue, indigo, and copper have been found in the secretion. In *hæmatidrosis*, blood corpuscles are found in the sweat, and in *uridrosis* the sweat contains urea. *Phosphorescent* sweat is occasionally met with. Here the body becomes luminous in the dark. It occurs sometimes in individuals who have partaken of putrid fish, also in the late stages of phthisis.

In the treatment of diseases of the sweat apparatus, more especially hyperidrosis, tonics of iron, quinine, arsenic, and the mineral acids should be exhibited, also belladonna, atropia, and ergot. Locally, lotions may be employed, and among the best are those of tannic acid and salicylic acid in the strength of one drachm to four or eight ounces of alcohol. Tincture of belladonna, full strength or diluted, is also valuable. Boracic acid, sulphate of zinc, alum, and chloral may also be referred to as useful. The application of the lotion may be followed by some dusting powder, as starch, lycopodium, oxide of zinc, alum,—one-half drachm or more of the latter to the ounce. Dusting powders containing boracic and salicylic acids must be mentioned as being serviceable.

One of the best modes of treatment is that by diachylon ointment and olive oil, equal parts, spread on linen cloths in form of plaster, and wrapped around the affected parts, the dressing being changed twice in the twenty-four hours. In the treatment of bromidrosis the same general rules apply. In this affection, the oleate of mercury, ten or fifteen per cent. strength, may be added to the list.

CLASS II.—HYPERÆMIA.

There are many diseases of the skin which commence with hyperæmia, but pass so quickly into inflammation that they are not classed under hyperæmia. Thus, in this class are embraced but two diseases, erythema simplex and erythema intertrigo.

ERYTHEMA SIMPLEX is usually local and occurs in the form of spots and patches variously sized and shaped. It is met with chiefly in infants, and may be occasioned by some disturbance of digestion. The lesions usually last only a few hours, but may continue several days. Other forms of this disease are caused by exposure to the sun, traumatism, local irritants, and poisons.

ERYTHEMA INTERTRIGO is a hyperæmic disease, characterized by redness, heat, and an abraded surface, with maceration of the epidermis. It is commonly known as chafing, and is caused by friction between two folds of skin, occurring especially in the axillæ, groins, beneath the mammæ, and between the nates. It is usually sudden in its advent, and is found for the most part on infants and on corpulent persons during hot weather. The disease is not always a passing disorder, but may persist, sometimes, for months.

Erythema intertrigo is the only form of hyperæmia calling for treatment, and it may consist in the use of dusting powders, such as starch, Venetian talc (silicate of magnesia), or alkaline lotions, as of borax or castile soap, followed by some dusting powder. If it does not yield to such simple measures, black wash, lotions of tannic acid, boric acid, or sulphate of zinc may be employed. If it still persists, then certain other remedies, to be mentioned under the treatment of erythematous eczema, may be used.

CLASS III.—INFLAMMATIONS.

ERYTHEMA MULTIFORME is an acute inflammatory disease, characterized by reddish, more or less variegated macules, papules, and tubercles, discrete or in patches. It occurs in various forms. The commonest is the papular manifestation, *erythema papulosum*. Sometimes the lesions are in the form of a ring, *erythema annulare*. Sometimes in the form of variously colored concentric rings, *erythema iris*. At times the patches assume large gyrate forms with irregular edges, *erythema marginatum*. The disease is acute, and, as a rule, of short duration, running its course in two or three weeks, sometimes being accompanied by febrile disturbance. It is inclined to show itself in crops, and it is a peculiarity of this disease to appear as a rule first upon the backs of the hands Generally it is confined to this region. The subjective symptoms are insignificant, compared with the apparent violent nature of the inflammation. It is most frequently met with in spring and autumn, and relapses are known to occur. Comparatively little is known of its pathology. The histology of the lesions reveals nothing beyond the ordinary inflammatory changes, and authorities regard it as the result of vaso-motor disturbance. In the diagnosis it must be distinguished from herpes iris, urticaria, eczema papulosum, and erythema nodosum. Little is to be said about the treatment, as the disease usually passes off in a week or two. Active local treatment is to be avoided, as it may aggravate the symptoms.

ERYTHEMA NODOSUM is an acute inflammatory disease, characterized by the formation of rounded, ovalish, or variously sized, more or less elevated reddish nodes. There is usually some prodromic febrile disturbance, and before the eruption appears, it is difficult to make the diagnosis. The eruption makes its appearance suddenly, having preference for the forearms and legs, especially over the tibiæ, and the site of the lesions is the seat of a burning or shooting rheumatic pain. The lesions vary in size from a chestnut to an egg, are rounded or ovoidal, present a variegation in color, and attain their height usually between the fourth and sixth day, when they look shining, and are tense. They are firm and painful on pressure, so that when over the tibiæ the patient may be unable to walk. The disease may also attack the mucous membrane of the mouth, tongue, and gums.

It usually occurs in weakly or debilitated subjects, is preceded and accompanied by languor, malaise, and rheumatic pains, and is of most frequent occurrence in

females, in childhood, and in adolescence. It is closely allied to erythema multiforme, some authorities even considering it as an advanced stage of this disease. The lymphatics are often involved, and the exudation is either plastic, serous, or hemorrhagic. The lesions may be mistaken for contusions, the similarity has even led to the name *dermatitis contusiformis*. It may be further confounded with a bruise, erysipelas, and threatening abscess.

The lesions are more deeply seated and more nodular than in erythema multiforme. As the disease ends in spontaneous recovery, little or no treatment is indicated. When the febrile symptoms are marked, quinine, aconite, laxatives, and salines may be employed. Rest is important, and locally, hot water applications may be made. The duration of the disease is from two to three weeks, and relapses are not common.

Urticaria is a disease which we are liable to meet with any day. It is known popularly as *nettle-rash* or *hives*, and is an inflammatory disease characterized by the formation of wheals of a whitish, pinkish or reddish color, accompanied by stinging, tingling or pricking sensations. Its advent is usually sudden, and the lesions are variable as to size, shape, and color. They may be circumscribed or diffuse, often showing a tendency to coalesce, forming patches of a rounded, ovalish, or elongate shape, sometimes gyrate. They are soft and firm, and may rise considerably above the surface. On an individual affected with urticaria, the eruption may be evoked by passing the finger-nail over the skin.

The disease is generally ephemeral, lasting but a few hours or a day, and individual lesions are capricious and fugitive. Every part of the integument is liable to be attacked, and it is apt to go from one region to another. It may even appear on the mucous membrane of the mouth and pharynx to the exclusion of the rest of the body, and may occur at all periods of life, children being particularly liable to it. It is an acute disorder, but may be chronic by relapses.

Urticaria papulosa is a form of the disease met with among the poorly cared for children and infants. It is common in London, but rare in Philadelphia. The lesions are in the form of small papules, are very persistent, and are annoying, especially at night. Urticaria may also occur with other diseases; *e. g.*, purpura, constituting *purpura urticans*. It may assume a bullous form, *urticaria bullosa;* or a large nodular type, *urticaria tuberosa*, or giant urticaria, the lesions having an elevation of a half inch or an inch, and are found most frequently about the head.

Acute Urticaria.—The advent is sudden and is preceded often by slight febrile symptoms, languor, malaise, gastric derangement, and constipation. In a few hours the whole surface of the body may be covered with wheals. The duration is variable, and relapses may or may not occur.

Chronic Urticaria.—The lesions are the same, though less acute than in the former variety, and the disorder may last for months or years; successive crops appearing daily or at intervals. The wheals may be ephemeral or persistent, while the general symptoms are usually wanting.

The causes of urticaria are numerous and varied. Among external irritants may be mentioned: stinging nettle, caterpillars, jelly-fish, etc. Among internal causes: gastric and intestinal derangement, fish, shell-fish, certain fruits, chloral, salicylic acid, iodide of potassium, intestinal worms, menstrual and other uterine disorders, organic diseases of internal organs, spinal irritation, neuralgia, asthma, and albuminuria. The pathology of the lesions consists of an acute inflammatory process in the papillary layer, with œdema of the skin. The circulation is interfered with, in the wheal the blood being driven from the centre to the periphery. The process is largely under the control of the nervous system. In some cases no cause can be detected.

The diagnosis is easy. It must be differentiated from erythema papulosum, erythema tuberculosum, and erysipelas. In regard to treatment, it is always important to investigate the cause, and when found to be a disorder of the alimentary canal, emetics, salines, and the repeated use of aperients should be ordered. Diet should be regulated, and some alkali administered; *e.g.*, liquor potassæ. In chronic urticaria, diuretics may be employed with benefit; *e.g.*, acetate of potassium. When gouty symptoms are present, alkalies and colchicum are indicated. Other remedies which may be found useful, are quinine, pilocarpine, atropia, sulphite and hyposulphite of soda, bromide of potassium, and chloral. Change of climate may also at times be useful.

Local treatment is of importance with a view of immediate relief. This may consist of baths or lotions, the same being agreeable and cooling. Lotions of vinegar and water, alcohol, brandy, or whiskey, may be used. The baths may be alkaline or acid. Carbolic acid is an excellent remedy, so, also, thymol, one to three grains to the ounce; chloral, chloral and camphor, each one drachm to one ounce of ointment, chloroform, ammonia water, and dilute hydrocyanic acid.

ORIGINAL ARTICLES.

ON THE PATHOLOGICAL AND PRACTICAL RELATIONS OF THE DOCTRINE OF THE BACILLUS TUBERCULOSIS.[1]

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The literature of the last quarter of a century, so far as it relates to pulmonary phthisis, offers a striking example of the mutability of medical opinions, and an instructive lesson for truth-seekers in the field of medicine. About twenty-five years ago, Virchow enunciated the dogma that the name tubercle should be restricted in its application to neoplasms known as miliary tubercles, or the granulations of Boyle; the phthisical products distinguished as infiltrated, crude, yellow, or cheesy tubercle having no claim to be considered as tuberculous. This dogma rested on an exclusively histological basis. It was accepted by many French and British, as well as by most of the German pathologists, and largely in this country. As a consequence, pulmonary phthisis and pulmo-

[1] Read at the First Stated Meeting of the New York County Medical Association, January 14, 1884.

nary tuberculosis were regarded as essentially distinct affections.

Phthisis, being relegated among the purely inflammatory diseases, received a variety of new names, such as broncho pneumonia, chronic catarrhal pneumonia, cheesy pneumonia, lobular pneumonia, etc. That phthisis and true tubercles were associated, in a certain proportion of cases, was admitted, and, reversing the teaching of Laennec as regards their relationship, the tubercles, in these cases, were regarded as occurring, not anterior, but secondary, to the phthisical products, being attributed to an auto-infection either from phthisical or degenerating products of some kind, somewhere within the body. Reasoning from these premises, in opposition to the results of the clinical studies of Laennec, Louis, and others, the development of phthisis was attributed often to an extension of inflammation from the bronchial tubes, and, not infrequently, to an antecedent lobar pneumonia. A peculiar predisposition to phthisis, as expressed by the terms diathesis, dyscrasia, and cachexia, was repudiated. A susceptibility to morbific agents of all kinds was alone admitted, under the name vulnerability. As practical consequences, patients affected with phthisis were treated by measures addressed to chronic inflammatory affections. Local bloodletting, counter-irritation, confinement within doors, mercurialization, and restricted diet—measures heretofore in vogue, which had become obsolete because experience had shown them to be hurtful—entered again, to a greater or less extent, into the practice of physicians in cases of phthisis.

These pathological, etiological, and therapeutical views, so widely at variance with those which had been established by the clinical studies of Laennec, Louis, and others, had their origin in the microscopical observations which led Virchow to conclude that an essential distinction exists, as regards the anatomical elements, between the ordinary phthisical products and the bodies to which he restricted the name tubercles.[1] During the greater part of the last quarter of a century, a large share of medical literature, in different countries, has been devoted to investigations and discussions either relating to, or growing out of, the dogma enunciated by Virchow. As a result of these investigations and discussions, the dogma and, of course, all deductions therefrom were at length shown to be erroneous.

It required, thus, nearly twenty-five years to emerge from errors due to a false conclusion from microscopical appearances observed in a pathological laboratory. The errors were not merely of pathological interest, but they influenced unfavorably the treatment of patients affected with phthisis. What is the lesson to be learned from this retrospect? It teaches, of course, the evils of hasty or rash pathological deductions; but I will go further and say that it teaches the importance of the clinical study of diseases as a safeguard against errors arising from exclusive attention to histological researches. Laennec, Louis, and they who followed in their footsteps, were painstaking, careful, and conscientious clinical observers. The fruits of their studies are as valuable to-day as they have been in the past, and they will remain so as long as the diseases which they studied and the human constitution continue unchanged.

In speaking thus of the importance of clinical medicine, I do not undervalue pathological researches. Of the importance of these, the subject of my paper offers a brilliant example.

A notable event in the literature of phthisis was the announcement by Villemin, in 1865, of the inoculability of tubercle. The accuracy of Villemin's experimental observations was speedily established by other observers. But the conclusion that inoculability proved the existence of a specific virus was opposed by experiments which appeared to show that morbid matter evidently not tuberculous, as well as putrescent organic substances, and those even which could have only a mechanical effect, were capable of inducing tuberculous disease in certain animals by inoculation. These apparent obstacles in the way of the recognition of a specific virus had been, in a great measure, if not entirely, removed when the discovery of a particular micro-organism—the bacillus tuberculosis—was announced by Koch in 1882.[1] The latter discovery may be said to be a sequel of that by Villemin.

Two things are remarkable in view of the recency of the announcement of Koch's discovery. It is remarkable that it should have at once excited so much interest in different countries. This has rarely been the case with past discoveries of like novelty as well as importance. It is remarkable that they who have already accepted the discovery are among those who, as practical histologists, are most competent either to confirm or disprove it.

The statement of the fact that a peculiar micro-organism, to which Koch gave the name bacillus tuberculosis, was found by him in tuberculous products, by no means expresses the length and breadth of the discovery. This fact, however, lies at the foundation of a new doctrine—a doctrine apparently in conflict with well-founded pathological truths, and of great practical importance.

Before considering its pathological and practical relations, let us inquire of what does this doctrine consist, and on what does its validity rest? Is the bacillus tuberculosis a veritable micro-organism?

The affirmative answer to this question must be based on the testimony of competent and trustworthy microscopists, and there is almost entire unanimity among these in the conclusion that the

[1] In a recent discussion at a meeting of the Berlin Medical Society, Virchow proposed to distinguish miliary tubercles and caseous hepatization as "bacillary affections." There does not seem to be any intrinsic impropriety in this name, but the unfortunate consequences of his former definition of tubercle do not afford encouragement for another attempt in the way of nomenclature.

[1] Of those who claimed that tuberculous disease in certain animals may be artificially produced by inoculation with non-tuberculous substances, Cohnheim and Wilson Fox were the most prominent and influential. As showing that, in the minds of these distinguished pathologists, the desire for truth is paramount to the pride of opinion, it is pleasant to state that Cohnheim, prior to Koch's discovery, and Wilson Fox, quite recently, have publicly made avowal that they were mistaken.

bacillus tuberculosis is a veritable micro-organism. Of this, positive proof is the reproduction of the organism by culture outside of the body.

Is the bacillus tuberculosis constantly found in morbid products, which, irrespective of its presence, are known to be tuberculous?

The affirmative answer to this question is sustained by a very general agreement among competent and trustworthy microscopists.

Is the bacillus tuberculosis found in morbid products which otherwise have no claim to be recognized as tuberculous?

So far as I know, an affirmative answer to this question is *not* sustained by the testimony of competent and trustworthy microscopists.

From these data it may logically be concluded that the bacillus tuberculosis is a peculiar parasitic micro-organism which is characteristic of tubercle. But the doctrine goes further. The nature and extent of the pathological connection of the bacillus with tuberculous disease are to be inquired into.

Is the bacillus tuberculosis the causative agent in the development of tuberculous disease?

This is an all-important question as regards the pathological and practical relations of the doctrine. Koch's discovery embraced the induction of tuberculous disease in certain animals by inoculation with the bacillus. In order for inoculability to constitute proof that the organism, *per se*, is the causative agent in the experiments, it is evident that the bacillus must be devoid of any morbific matter which might be adherent to it. This essential requirement is secured by repeated cultivations in a culture-medium out of the body. Koch found that the organism, after it had been carried through several generations, was capable, by inoculation, of inducing tuberculous disease. Assuming accuracy of the observations, this result is demonstrative proof that the bacillus, at least in the experiments on certain animals, is the causative agent in the development of tuberculous disease. The accuracy of Koch's experimental observations in this regard has not been disproved. Reasoning from analogy, and still assuming the correctness of the data, it is a logical conclusion that pulmonary phthisis, in the human subject, is caused by the presence of this parasitic organism.

This completes the doctrine of the bacillus tuberculosis. It follows therefrom that pulmonary phthisis is an infectious disease, using this term infectious in the sense in which it is at present used by most medical writers, namely, as denoting disease dependent on special causative agents, which, under favorable circumstances, are capable of multiplication indefinitely either within or outside of the body. The multiplication of the special causative agent in phthisis, takes place within the body. The disease is therefore communicable by means of the causative agent, the bacillus. The causative agent, thus, is a *contagium vivum*. If the validity of the doctrine be acknowledged, it must be admitted to be vastly improbable that phthisis is ever developed without the presence of the parasite. It may be laid down as a law in etiology, that the agency of special causes is essential in the development of all infectious diseases, and there is no reason for supposing that phthisis is an exception to this law. Another conclusion must be admitted, namely, that pulmonary phthisis, is primarily a local affection. The initial morbid processes take place in the lungs, being due to the presence of the parasite. The bacilli, doubtless, inhaled with the inspired breath, become colonized within the pulmonary alveoli. They give rise to tuberculization in the situations which they inhabit. The local affection extends in consequence of their invasion, successively, of different parts of the pulmonary organs, and the development of the disease in other situations depends on their migrations.

We are now to consider an apparent antagonism between the doctrine of the bacillus tuberculosis and certain facts derived from the clinical study of pulmonary phthisis. In view of such an antagonism, what are we to do as seekers after truth? Are we to repudiate the doctrine on the one hand, or the clinical facts on the other hand? We are to do neither the one nor the other. We are to satisfy ourselves of the truth of the doctrine, and that the clinical facts are well grounded; then, the doctrine and the facts are to be reconciled. If the doctrine be true and the facts well grounded, there must be a way of reconciliation. In reality, the antagonism is apparent only, not actual, as I shall endeavor to show. The antagonism relates especially to the existence of a tuberculous diathesis, to the well-established operation of causative agencies other than a contagium, and to a lack of clinical evidence of communicability.

Pulmonary phthisis is eminently a diathetic disease. The diathesis, that is, the predisposition, is evidently in some persons innate. How otherwise are to be explained the instances in which many children in certain families become victims of the disease—instances which are too many to be accounted for on the ground of accidental coincidence? No one who has given any attention to the statistics of this disease, can doubt that heredity is involved in the causation. That the disease is developed much oftener in some climates than in others, is certain, and it is equally certain that, irrespective of climate, insalubrious situations, a humid soil, confinement in illy-ventilated rooms, insufficient alimentation, and mental depression, exert a causative influence. No fact in medicine is better established than that age enters largely into the causation of pulmonary phthisis.

How are these facts to be reconciled with the doctrine which teaches that the efficient causative agent in the development of this disease is a contagium? And, as regards communicability, statistics have failed to prove that this disease is contagious. It is true that isolated instances seem to point to its communicability, but the analytical study of large collections of recorded cases seem to furnish evidence against, rather than for, contagion. Of those who are brought into close proximity to phthisical patients in hospitals or elsewhere, how small is the proportion who become affected with the disease! At the time of Koch's discovery, there were a few physicians who believed that phthisis

might be communicated; but the great majority of the members of the medical profession had no faith in its contagiousness. How are these facts to be reconciled with the doctrine which teaches that phthisis is never developed without the presence of a contagium vivum?

The special morbific agents which give rise to infectious diseases require for the efficiency of their causative action certain special concurrent, coöperating conditions within the body. This requirement is greater in some than in other diseases, but the statement is probably applicable to a greater or less extent to all. The special agent is an essential factor; and another, not less essential, is the existence of the requisite concurrent, coöperating conditions. The nature of these conditions is unknown, but the fact of the necessity for their existence in the causation of diseases is as certain as if they were known. We may embrace these conditions under the name predisposition. If the special causative agent be a micro-organism, it is customary to say that, like certain plants, it needs for its growth and multiplication certain peculiarities of soil. The term predisposition embraces these peculiarities. The two factors in the causation, namely, the special causative agent and the concurrent, coöperating conditions embraced under the name predisposition, in their application to yellow fever, were compared by the late Dr. Barton, of New Orleans, to the two blades of a pair of scissors; their efficiency depends on their being joined together; separated, each is powerless.

The predisposition to pulmonary phthisis involves all causes exclusive of the special causative agent—the bacillus. An innate tendency, heredity, and the other causes already referred to, exert their influence by inducing or promoting the predisposition to the disease. The predisposition is the diathesis. It may be either congenital or acquired. It may exist and afterward disappear. It may probably be removed by measures employed for that end. This last statement is of great practical importance, and will be referred to in another connection. If the predisposition be wanting, persons are insusceptible to the special cause of pulmonary phthisis. However large the number of bacilli inhaled, they are powerless, like the separated blade of a pair of scissors. If the predisposition exist, phthisis will be developed, unless the inhalation of bacilli can be avoided; and this, in most parts of the world, is impossible, so long as the disease is as prevalent as it now is. The susceptibility dependent on the predisposition doubtless varies much in degree in different persons, and at different times in the same person. The danger of contracting the disease, as it is reasonable to suppose, is proportionate to the degree of the susceptibility. It is also a rational supposition that the danger is, in a measure, proportionate to the degree of exposure to the contagion.

The views just presented are not peculiar in their application to tuberculous disease. The susceptibility to this disease, as shown by the results of inoculation, are far from being the same in all animals. It is great, for example, in rabbits, and comparatively slight in dogs. Some persons are insusceptible to the special causes of certain diseases, smallpox included. To certain of the contagious diseases the susceptibility is extinguished if the disease be once experienced. On the other hand, the occurrence of certain diseases (for example, relapsing fever), does not in the least lessen the susceptibility to their causes. Persons may be exposed many times to contagia or other special causes with impunity, the diseases becoming at length developed on exposure. In short, I have applied to pulmonary phthisis well-known truths as applied to other infectious diseases. These truths are novel, and may seem startling in their application to pulmonary phthisis, because, up to the present time, few physicians have been accustomed to look upon this disease as belonging among the infectious diseases.

I proceed to consider briefly the doctrine of the bacillus tuberculosis in its practical relations. In this division of the subject, we are to inquire into the relations of the doctrine to the diagnosis, prognosis, and treatment of pulmonary phthisis.

Of the importance of the bacilli in diagnosis, I can speak from personal knowledge. For several months I have obtained the results of examinations of sputa for bacilli in a large proportion of the cases which have come under my observation in hospital and in private practice. Not claiming to be a microscopist, it is proper to state that these examinations have been made either by my colleague, Prof. William H. Welch, or by my clinical assistant, Dr. William H. Flint, or by Dr. H. M. Biggs, Senior Assistant Physician of the Third Medical Division of Bellevue Hospital. The results taken in connection with the histories, the symptoms, and the physical signs, have satisfied me that the bacilli in the sputa may be relied upon as proof of the existence of tuberculous disease. There is abundant, competent testimony to the correctness of this statement. I am led to believe that, if repeated examinations, made with sufficient care, show the presence of the parasite, the diagnosis of phthisis is positive, and, on the other hand, if, on repeated and careful examinations, bacilli be not found, phthisis may, with much probability, be excluded. I ~~return~~ to predict that the time will soon come when, in order to corroborate the diagnosis, and as the hinge on which the question of diagnosis will turn in certain cases, microscopical examinations of sputa will be considered to be as much a matter of course as examinations of urine for evidences of renal disease. In cases of suspected phthisis, when the diagnosis is not rendered clear by physical signs, the presence or the absence of bacilli in the sputa will serve to determine either that the disease exists, or that it may be excluded. I could cite many cases which have been under my observation, in illustration of the value of this criterion of pulmonary phthisis.

So far as my experience goes, an abundance of bacilli in the sputa of phthisical patients is evidence of active progress of the disease, and *vice versa*. I am prepared to believe that in the number of bacilli found on repeated examinations, we have important data for forming a judgment in relation to prog-

nosis. I have been much interested in the study of some cases of lesions incident to advanced phthisis, as shown by physical signs denoting solidification of cavities, in which bacilli in the sputa were few or wanting. The results of the microscopical examinations of the sputa in these cases, corresponded with the history and symptoms in showing that the tuberculous disease had ceased, and that the patients suffered only from the lesions resulting therefrom. The bearing of this fact on prognosis is obvious. We may hope for the recovery, or at least, an indefinite prolongation of life in cases of phthisis in which the lungs are considerably damaged, provided the tuberculous processes of disease have ceased. I have enunciated in different publications the conclusion based on my own clinical studies, that pulmonary phthisis is a self-limited disease. The parasitic doctrine is in full accord with this conclusion. After a series of successive generations, the race of bacilli becomes extinct, probably because the local conditions for further multiplication no longer exist. In this regard, the tuberculous affection resembles other infectious diseases.

Lastly, the relations of the doctrine of the bacillus tuberculosis to the prevention and treatment of pulmonary phthisis, are the most important of the practical aspects of the doctrine.

The prevention of the disease can be effected by the accomplishment of either one of two objects, namely: First, avoidance of all exposure to the contagium; and, secondly, the removal of the concurrent, coöperating conditions in which consists the diathesis, the predisposition, or the susceptibility.

The first of these objects is not easily accomplished. Wherever there are cases of phthisis, the respired atmosphere may contain bacilli. We may be at this moment inhaling them if, among this audience, there are persons affected with phthisis. If there be a spot on the globe where there is not, and has never been, a case of phthisis, in that spot a person—no matter how great may be the predisposition—is safe. But where among the places in which persons may wish to live is such a spot to be found? It is evident that prevention by this method cannot be reduced to a degree approaching to certainty. Perhaps as safe a situation as any, exclusive of uninhabited regions, is on shipboard, provided it is certain that all others on board are free from phthisis. But we cannot enjoin on healthy persons to spend their lives at sea, especially inasmuch as we have no positive criteria of a tuberculous predisposition prior to the development of phthisis.

Preventive measures, moreover, relating to this object are not to be ignored. Assuming the existence of a tuberculous predisposition, there may be more or less exposure to the contagium, and the disease be not developed, the bacilli failing to become colonized. Exposure to the contagia of other diseases, or to infectious matter multiplied outside of the body, is by no means always followed by infection. Danger of infection is, of course, other things being equal, proportionate to the degree and duration of exposure. Hence, preventive measures, in this direction, are to be employed as far as practicable. Healthy persons should not occupy the same bed with phthisical patients, nor the same room at night, unless the dictates of duty, humanity, or affection, require that the risk of infection should be incurred. Sanitaria for phthisical patients and situations considered as favorable for those patients, should be avoided by those who are not tuberculous, in their choice of health resorts. The disinfection of sputa from phthisical patients by some simple but effective means is to be recommended. The freest possible ventilation of rooms or hospital wards occupied by phthisical patients should be secured. It is probable that not a little can be accomplished, in the way of prevention, by proper attention to these points.

The prevention of phthisis by the removal of the predisposition is a more available method. Here we labor under the difficulty of not being able to recognize with positiveness, by any criteria as yet ascertained, the existence of the tuberculous predisposition. Its existence should certainly be suspected if brothers or sisters have died with phthisis, and whenever there is reason to suppose that the predisposition may be inherited. Especially are preventive measures in this direction to be employed during the period of life when the disease is most apt to be developed, namely, from twenty to thirty years of age. Evidently, if preventive measures be practicable, it is far better to be oversuspicious of the tuberculous predisposition than to err in not having suspicion sufficiently aroused.

Ignorance of the particular conditions which constitute the predisposition to phthisis, is to be confessed, and we must, therefore, be guided by the lessons of experience and of common sense in the endeavors to remove this predisposition. These lessons teach that a dry, salubrious, uniform climate, the atmosphere rarefied by altitude, ample alimentation, life in the open air, a fair proportion of muscular exercise, protection of the surface of the body from cold, and cheerful spirits, are measures to be relied upon for this object. The measures, in other words, are those which tend to produce the highest grade of constitutional vigor. It is certain that the prevalence of phthisis would be greatly diminished by these measures; and if every member of the human family could be made to enjoy in the utmost degree the blessings of hygiene, who knows but that, in the course of time, the complete extinction of this disease might be included among the triumphs of preventive medicine.

The treatment for the arrest of pulmonary phthisis has reference to two objects: first, the destruction of the parasite, and, second, the removal of the conditions on which it depends for its existence.

Although not quite two years have passed since the announcement of Koch's discovery, many experimental observations have been made with a view to discover an effectual parasiticide which will destroy the bacilli by direct contact, either by means of inhalation, or by introduction into the circulatory system. Various substances which are known to be destructive to micro-organisms outside of the body, have been employed, such as corrosive sublimate, iodoform, bromine, arsenious acid,

salicylate of soda. Thus far they have proved ineffectual.[1]

There are three difficulties in the way of success by means of inhalation. The first is to discover the particular parasiticide. This difficulty applies alike to both methods of effecting the destruction of the parasite by direct contact. Of the different infectious diseases supposed to depend on the presence of micro-organisms, each has its own parasiticide. Mercury, for example, is an effective agent in cases of syphilis, but it has no effect upon malarial disease; and the specific agent for the latter is without effect in syphilis. For most of the infectious diseases, the specific curative agents remain to be ascertained. The second difficulty in the way of the direct destruction of the parasite by means of inhalation is, that the agent for its destruction, inhaled in the form of either an impalpable powder, a vapor, or a gas, is not likely to reach the colonies of bacilli in sufficient quantity to effect the object. The third difficulty is, that a parasiticide brought into direct contact with the bacilli by means of inhalation, in sufficient quantity to destroy them, is likely to injure the tissues, or, by passing into the blood, to induce toxæmia.

The two last-named difficulties do not apply to the introduction of parasiticides into the blood. It remains to be ascertained by experimental observations which, as yet, are but commenced, whether a parasiticide can be found capable of effecting the first object in the treatment, namely, the direct destruction of the parasite, by means of either its inhalation or its introduction into the circulation. That this object may be effected, is by no means beyond the limits of possibility, nor, perhaps, of probability. For this we must wait patiently. Meanwhile, the second object in the treatment, namely, the removal of the conditions on which the parasite depends for its existence, is not to be overlooked, nor undervalued.

Let it be borne in mind that the continuance, as well as the origin, of pulmonary phthisis, depends on two factors—the presence of bacilli and the concurrent, coöperating conditions. The disease will cease to progress whenever either factor ceases to exist. Without the conditions just named, the generation of bacilli must end. Without bacilli, there can be no tuberculosis. The bacilli are destroyed by removing the conditions on which their existence depends, as surely as by an effective parasiticide. Applying, in the plural number, the language of Shylock, "you take their lives when you do take away the means by which they live." The measures for the removal of these conditions are precisely those pertaining to hygiene, which enter into the preventive treatment, and they need not be here recapitulated.

In conclusion, I will summarize an estimate of the pathological and practical relations of the doctrine of the bacillus tuberculosis, at the present moment, by quoting the concluding paragraph of another article:

"The researches of Koch and others have extended our knowledge of the pathology and etiology of pulmonary phthisis. Their practical bearings on diagnosis and prognosis are important, and they have opened up inquiries in relation to prophylaxis which may lead to useful results. But, as regards hygienic and medicinal agencies in the treatment of the disease, we have thus far acquired nothing beyond the rational views and the lessons of experience by which physicians were guided prior to the discovery of the bacillus tuberculosis. These views and lessons remain unaffected by the discovery. In the adaptation to individual cases of phthisis, of remedies, diet, regimen, and climatic changes, we are to continue in the endeavor to judge by the light of reason and experience; and it is not less a duty now than heretofore to accumulate facts which have practical bearings, irrespective of any doctrine."[1]

FATAL CASE OF PERITONITIS,[2]

CAUSED BY PERFORATION OF THE APPENDIX VERMIFORMIS, DUE TO THE LODGEMENT OF A CONGLOMERATE MASS OF SMALL SEEDS.

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ON Friday, October 5, 1883, I was called in consultation with Dr. W. T. Leachman to see a young girl about 13 years of age, who, on the preceding Monday, while at the Exposition, had been suddenly seized with pain in the abdomen, located in the right inguinal region. Upon reaching home she had been put to bed and given a dose of castor oil. The next day Dr. Leachman was called in, and found her with slight fever, the temperature being 99.5°, the pulse rapid, and the respiration quickened and almost entirely pectoral. The pain was excruciating and could only be relieved by large and frequently repeated doses of opiates.

In answer to inquiries as to the possible cause of her sickness, she stated that five or six weeks previously she had swallowed a copper coin, and though she had watched closely her actions since, she had failed to find it. It was thought that possibly the coin might have lodged in some fold of the intestine, and, ulcerating its way through the walls, caused the peritonitis. A large poultice, covered with oil-silk, was applied over the entire abdomen, and opiates given in sufficient quantity to relieve the pain.

When I saw her on Friday there was considerable tympanitic distention of the abdomen, with great tenderness over the entire surface, more noticeable

[1] MM. Parrot and Martin have reported in the *Revue de Médecine* (Nos. 9 and 10, 1883) the results of experiments with a view to discover a parasiticide which will be effectual without injuring the tissues. They found that salicylic acid, sulphate of quinine, corrosive sublimate, carbolic acid, creasote, bromine water, and peroxide of hydrogen, in quantities suitable for administration, have no influence on the bacillus. *Vide* THE MEDICAL NEWS, December 22, 1883.

[1] *Vide* Appendix to A Treatise on the Principles and Practice of Medicine, by the writer. Fifth edition, 1883.

[2] Read before the Medico-Chirurgical Society.

in the right inguinal region, and there was dulness on percussion over an area three or four inches in diameter in the same locality. There was evidently general peritonitis most intense over the right side of the abdomen. The poultice was continued, opiates given in sufficient quantities to relieve pain, and every effort made to administer nourishment, both by the stomach and rectum. She was able to retain very little nutriment, and continued to grow worse until Monday night, just eight days from the time she was taken sick, when she died.

On Tuesday night, twenty-four hours after death, we made a post-mortem examination of the abdomen, no other portion of the body being opened. The intestines and mesentery were found extensively matted together by inflammatory lymph of recent formation. Douglas's cul-de-sac was filled with a purulent collection, and there were several collections of pus found in the neighborhood of the cæcum. The vermiform appendix was carefully examined, and upon withdrawing it two small ulcers were discovered about one inch from the extremity, which communicated with the cavity, and which had no doubt allowed the escape of fecal matter into the peritoneal sac. Near these openings was found in the appendix a small hard mass which, upon removal, looked like a cherry-seed. Subsequent microscopic examination of it by Prof. Holland and myself revealed it to be a collection of small seeds, as of the blackberry or strawberry, matted together into a hardened mass. This mass, or one like it, was no doubt the cause of the inflammation. A careful search in the entire course of the intestinal tract was made for the copper coin without discovering any trace of it. It had, in all probability, been passed without her knowledge.

This case illustrates very clearly the fact, that there may be greater danger in eating blackberry or strawberry preserves than in swallowing cherry-stones, peach-stones, or coins.

MEDICAL PROGRESS.

Bacilli of Cholera Infantum.—At a recent meeting of the Berliner Med. Gesellschaft Dr. A. Baginsky made a report on the bacilli of cholera infantum, which he has found both in the dejections and in the intestinal mucous membrane. In the dejections, along with numerous other micro-organisms, Baginsky found masses of zoöglœa, whilst the Peyer's patches in the upper part of the small intestine were filled with microbes containing bacilli, the wandering of which into the submucous tissue could be frequently recognized. Here, also, the zoöglœa masses could be made out as well as in the dejections.—*Allg. Wien. mediz. Zeitung*, Nov. 6, 1883.

Napelline in Facial Neuralgia.—M. Grognot has recently reported an interesting case showing the efficacy of napelline in facial neuralgia. The case was that of a young girl who, for three years had had violent periodic facial neuralgia, though independent of menstruation. Aconitine was tried repeatedly, and failed to give permanent relief. Finally, napelline was administered in pills containing one-thirtieth of a grain, ten pills being given daily. After a few hours the pain disappeared. Two months later another attack was successfully treated.

It is well known that amorphous aconitine is more often successful than the crystalline. This is due, says Grognot, to the fact that the napelline contained in the amorphous variety has been removed from the crystalline.—*L'Union Méd.*, December 6, 1883.

Influence of Quinine on Heat-production and Heat-loss.—While Binz, Naunyn, and Quincke concluded from their observations that the antipyretic action of quinine is due to a diminished production of heat, Wood has recently asserted that after the administration of quinine there is an increased loss of heat, amounting to about sixty per cent., and, at the same time, an increased heat-production of about forty-three per cent.

H. Arntz has still more recently (*Pflüger's Archiv*, xxxi. S. 531) investigated the subject on normal and fevered rabbits, and draws the following conclusions:

The use of quinine has, with few exceptions, no influence on the loss of heat through the skin. In rabbits with septic fever there is a considerable decrease of oxygen consumption, and when immersed in a bath of the temperature of the body all loss of heat ceases. This is not observed in the case of non-fevered animals. *Centralbl. f. d. med. Wissensch.*, November 24, 1883.

The Couveuse, or Artificial Nurse.—This apparatus was introduced into the Maternité at Paris, by Tarnier, in 1881. It is composed of a wooden box, the walls of which are about four inches thick, and filled in with sawdust. The box rests upon a pedestal. The height of the whole couveuse is thirty-eight inches, length twenty-eight inches, depth thirty-four inches. It is divided into two compartments by a central division. The lower compartment contains warm water; the upper is for the infant. The metal case holding the warm water almost entirely fills the lower compartment. Between the walls of the box and the metal case is a free space for the circulation of air, which enters from the bottom of the apparatus, and, after circulating, escapes through apertures in the top.

The infant is placed in the upper compartment. It is separated from the water-tank by an air-space, and communicates with the exterior by two openings, one for the escape of air, the other for removing the infant when necessary.

A thermo-siphon is attached to the water-tank, which heats the water by a spirit-lamp. The temperature is determined by placing a thermometer by the infant. The water is removed by the stopcock at the bottom, and introduced through the upper tube leading from the thermo-siphon. The temperature is kept at a mean of 86° F. Dr. Budin has attached an electric alarm, in case the heat becomes too great.

At the Maternité the infant is generally placed under the care of a nurse, as the mother is usually in another ward. When the infant is born before term and is very feeble, it is fed on pure asses' milk, from a spoon or glass. The infant is clothed just as other nursing infants. The linen is changed five or six times a day, and a daily bath is given.

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OÖPHORECTOMY AND HYSTERECTOMY FOR UTERINE FIBROMATA.

AT the recent Congress of German Naturalists and Physicians, held at Freiburg, as we learn from the *Archiv für Gynäkologie*, Bd. 22, Heft 1, 1883, DR. WILDOW read a paper on "Castration for Uterine Fibroids," in which he gave the statistics of 66 operations, with 12 deaths, or a mortality of 19 per cent. Of these, Lawson Tait lost 5 out of 26, and Hegar lost 5 out of 21. In the discussion which followed, Freund stated that he had had 6 cases, with 1 death, and Müller, also, reported 6 cases, with 1 death. In the majority of the cases in which the result was known, the bleeding soon ceased, and the menopause and the diminution in the size of the growth soon set in. In several instances the menses continued, a fact that had been observed by Schatz after double ovariotomy.

In a paper contributed to the *Transactions of the American Gynecological Society*, vol. vii., 1883, Mr. J. KNOWLSEY THORNTON discusses the relative value of hysterectomy and oöphorectomy for the cure of uterine fibroids, and he refers to 76 cases of the latter operation, with a mortality of 15, or 19.73 per cent. If, however, the death-rate be based upon the results of surgeons who have had the most experience, it will be found to be greatly decreased. Thus, Tait has had 38 cases, with 33 recoveries; Hegar, 21 cases, with 16 recoveries; Savage, 14 cases, with 14 recoveries; Thornton, 8 cases, with 8 recoveries; Freund, 6 cases, with 5 recoveries; and Müller, 6 cases, with 5 recoveries. In other words, 93 cases in the hands of skilled operators afford 81 recoveries, and 12 deaths, or a mortality of 12.90 per cent. Of 221 hysterectomies, on the other hand—under which procedure are included all cases in which the uterine cavity is laid open, and more or less of its wall removed along with the fibroid, with or without excision of one or both of the ovaries—performed by Péan, Sir Spencer Wells, Billroth, Thornton, Bantock, Koeberlé, Schroeder, Hegar and Kaltenbach, Savage, and Thomas, 131 recovered, and 90, or 40.72 per cent., perished.

Having thus shown that oöphorectomy is attended with far less risk than hysterectomy in the hands of practised surgeons, Mr. Thornton asserts that supravaginal hysterectomy in the class of cases under consideration still remains a most formidable operation, and subjects the patient to the risk of ventral hernia. That this operation, which includes the removal of the tumor, the uterus, and the uterine appendages, is a most grave one cannot be doubted; but that it is not formidable to one thoroughly skilled in abdominal surgery is shown by the wonderful experience of Dr. Thomas Keith, which may be found in the *British Medical Journal*, for December 8th. Of 25 supravaginal hysterectomies performed by this surgeon during the past ten years, only 2 were fatal, and the success is the more astonishing when we learn that all but three were hospital cases. The average weight of the tumors was seventeen pounds; seven of the cases were most trying and difficult to complete; and the bladder had to be dissected off in not less than six. All of the 23 women who recovered enjoy excellent health, and in not a single one is there the slightest approach to a hernia. And yet, despite these unparalleled results, this modest, honest, preëminent surgeon in his branch, thinks that his death-rate can be reduced.

The mere removal of the ovaries does not always entirely stop menstruation, or the growth of the tumor. Mr. Thornton, in his comments upon the failures, states that, in addition to the excision of the ovaries, the dilated tubal and ovarian arteries and veins must be tied to insure success. Unless the chief blood supply be cut off the operation may fail. The uterine arteries are seldom very large; they are difficult to get at, and in tying them there must be great danger of including the ureters. So great is his belief in the arrest of the chief blood supply being the important factor in the cure, that he should in the future prefer oöphorectomy with ligation of the vessels to enucleation through the vagina for intramural and submucous tumors, unless they are already becoming exposed by thinning or necrosis of the mucous membrane.

It is to be regretted that Dr. Keith has not entered fully into the details of his manner of operating. Most of his operations were extraperitoneal, that is, the stump was secured outside of the belly by a very large clamp. He finds Kœberlé's instru-

ment most useful in half extra- and half intraperitoneal cases. The broad ligaments were almost always separated off the tumor and tied separately. Extensive enucleation was often necessary in order to place the wire as low down as possible when there was no cervix. As the bladder often rises as high as the umbilicus, and as it is not always easy to distinguish its edges, if the "stupid direction be followed that it be emptied before the operation is begun;" it should be left full. In his operations the carbolic spray is discarded.

THE DWIGHT INSURANCE CASE, AGAIN.

In the interesting review of the Dwight insurance case, which appeared in our last number, from the pen of Dr. H. C. Wood, we find nothing to alter the opinions given in a former issue (December 22). Even the unanimity with which experts for the defence adhered to the opinion that Dwight died from strangulation, effected by a cord around his neck, does not shake our convictions, and their consistency in adhering to the opinions once formulated does not necessarily increase our confidence in their accuracy. Consistency is a jewel, most truly; but the moral courage necessary to change opinions for the sake of truth is an altogether higher quality. We do not therefore sympathize with the felicitations on the constancy with which the experts adhered to their opinion.

Their uniformity of opinion, moreover, does not strengthen a fact which rests on individual judgment. This, Dr. Wood seems conscious of in the following observation: "If the facts sworn to by Dr. Swinburne are as he alleges, I can but reiterate my opinion expressed upon the stand, that there is no room for doubt as to the cause of death"—that is, by strangulation. It appears that the experts assembled by Dr. Flint in Philadelphia had all reached this conclusion, and from the same premises—the observations of Dr. Swinburne. With the exception of Dr. Wood, these experts, it further appears, did not give evidence at the trial, and they now disappear from the record.

With prepossessions in favor of Dr. Swinburne, and believing him quite incapable of any voluntary or designed misstatements, we nevertheless see in his testimony the evidences of strong partisanship. He saw an indentation in the neck, produced, as the undertaker testified before the Coroner's jury and at the trial, by bending the neck and by the pressure of the chin supports used. Dwight's neck was short, thick, and bearded. If we add to the effect of bending such a neck the sugillation, and the fixation of the parts by freezing, we have an adequate explanation of a condition which to a mind possessed with the idea of fraud, might appear to be produced only by a cord.

Those post-mortem conditions supposed to be due to death by strangulation, were referred by us to morphine poisoning; an opinion which was based upon a careful study of the sworn evidence given at the Coroner's inquest. The experts for the defence reply that the administration of morphine was not mentioned at the trial, and, therefore, should not figure in any review of the case. We have no purpose to subserve except the interests of the truth and independent journalism, and they demand that the facts in evidence, developed under oath at the Coroner's inquest, must not be ignored in the study of this remarkable case.

The claim that the testimony before a Coroner's jury is "confidential," is not entitled to serious consideration. In what year of grace did a Coroner's investigation assume the mysterious attributes of a Star Chamber Inquisition? A Coroner's court must, necessarily, in a free State, be entirely open and public; and, moreover, the facts there developed constitute "legal evidence" and a criminal is deprived of his liberty under its procedures.

If the testimony before the Court varies from that given before the Coroner, is not the credibility of the witness correspondingly injured? As a rule, if the mere facts of a case are sought for, they are to be obtained in a truer and fresher state from the Coroner's inquest, which is promptly held after the death. Later, in the process of "sifting" and case-preparing, in the partisanship, in the spirit of contest and desire of triumph, facts are modified and interpretations put on them not warranted by their original meaning. It is therefore important to get the facts from that period when they had not been tampered with by opposing counsel, or interpreted by partisan experts. In the testimony given before the Coroner, we find information regarding the influence of morphine in determining the fatal end of Dwight, and a further review of that testimony more than ever impresses us with the importance of morphine as a factor in the result.

On the day and evening of Dwight's death, he had taken somewhat more, it is probable, than three grains of morphine; the last dose administered hypodermatically, about two hours before death. As he had a singular insusceptibility to the soporific effect of morphine, it was given him in a lavish manner. He had declared that he could take it in any quantity, and that there need be no apprehension about giving it to him; hence the remarkable quantity administered on the day of his death, in anticipation of the supposed congestive chill, due on the following day.

That there was danger in the use of so much morphine, notwithstanding the apparent indifference of the nervous system, is shown in an experience of

his physician, who testified before the Coroner that on one occasion, Dwight falling asleep under the effect of considerable doses, "his breathing was hurried, and I had a little doubt in my own mind," *i. e.*, regarding the effect of the morphine. It is this action on his respiratory system to which we refer the unfortunate termination of the case. On the night of his death, and two hours before the end, Dwight had received a subcutaneous injection, and afterwards expressed himself as "comfortable," and disposed to sleep. Whilst his friend who watched sat reading, about two hours after this last dose, he heard a sound indicative of difficult breathing, and approaching, found Dwight in the agony of death, from respiratory failure.

Any one familiar with the action of morphine when given subcutaneously, will recognize in this one of the modes of dying from this agent. Those, of course, who have no other conception of morphine narcosis than stupor and slowly failing respiration, may find it difficult to appreciate a termination in which respiratory spasm and paralysis are coincident. The cases in which death ensued in the mode here described are, unfortunately, too numerous to permit of doubt.

DIPHTHERIA AND PSEUDO-MEMBRANOUS SORE THROAT.

THE practitioner of ordinary experience soon recognizes a decided difference between that grave constitutional disease known as diphtheria, in which a false membrane starts at one point and extends in various directions, and a form of angina also accompanied by high fever and painful deglutition, to which are added one or more white patches, mostly on the tonsils. These, however, do not spread, and within seventy-two hours generally drop out, leaving a clean depression, which rapidly disappears. Coincidently with the disappearance of the white patches, the fever and other constitutional symptoms decline and recovery is rapid.

It is well known, too, that some physicians are in the habit of terming this latter condition diphtheria, and acquire not a little ill-founded reputation among their immediate adherents for invariable success in the treatment of this fell disease, although they have had to do with a harmless local condition, often accompanied, it is true, by disproportionately intense general symptoms, but which would have disappeared without treatment in a couple of days.

What, however, is this circumscribed, white, circular patch, a quarter to a third of an inch in diameter, which at the end of forty-eight hours drops out and leaves the clean, punched-out cavity referred to? It consists of the mucous membrane, including its epithelial and subepithelial layers, infiltrated with white blood-cells, cemented by coagulated fibrin, and permeated by countless bacteria. It is, therefore, from the standpoint of morbid anatomy and pathological histology, false membrane in the strict sense of the word, as much as the false membrane of true diphtheria and croup. At the same time, it is evident that the disease is not the constitutional affection known as diphtheria, but contrasts strongly with it in its purely local nature, its harmlessness, its curability, and short duration. It is evident, too, that we have no name in medical terminology so definitely associated with this condition as to make it invariably evident to all readers and listeners what is meant.

The terms acute follicular tonsillitis, ulcerated sore throat, and diphtheritic sore throat, have all been used to describe it. It has also been called *herpes* and *eczema tonsillaris*. Were it certain that one of these white spots always encircles a follicle of the tonsil, as it often does, and as is proved by the presence of a minute hole in its centre, the first term would be perhaps the best. But this is by no means invariably the case. The term ulcerated sore throat is unsatisfactory because it does not indicate the local peculiarity. With regard to the last-named title, while the tonsils are subject to the same vesicular or pustular inflammations as the cheeks and gums, resulting in the painful gray ulcers, surrounded by red areolæ, with which we are all familiar, these ulcers are very much more rare on the tonsils, and the process is not that to which we allude.

The term diphtheritic sore throat, as distinct from diphtheria, is objectionable because it suggests an alarming and dangerous constitutional disease, the mere idea of which is sufficient to excite a panic. This objection cannot be made to the term pseudo-membranous sore throat, while the scientific accuracy of the term cannot be questioned. There is a sore throat—a tonsillitis and a pharyngitis—but along with this is a condition, which morbid anatomists the world over have agreed to call a diphtheritic or croupous exudation, the result of a circumscribed, intense inflammation, which is distinguished from the catarrhal inflammation which accompanies it by this patch of false membrane.

It appears, therefore, that the term pseudo-membranous sore throat should be adopted, and we should teach our patients generally, what many of the more intelligent ones already know, that there is a vast difference between diphtheria and pseudo-membranous inflammation; that the former is a general disease with a local product, and that the latter is a mere local disease with a local product, which, although identical in structure with the former, has a very different significance.

PERMANENT CATHETERISM OF THE ŒSOPHAGUS.

KRISHABER, of Paris, in a paper read at the International Medical Congress, 1881, recommended that in carcinoma of the œsophagus, a soft tube be passed, through the obstruction by way of the nares, and be permanently retained, for the double purpose of feeding the patient and inducing dilatation of the contraction. That the suggestion was a most happy one, was demonstrated by two cases in which the patient was nourished, respectively, for one hundred and sixty-seven and three hundred and five days by this method of treatment.

In a discussion on the management of malignant stricture of the œsophagus, which took place at the Clinical Society of London, in 1881, MR. DURHAM narrated a case in which a tube had been retained for four months, and the patient was doing well. In vol. xii. of *St. Thomas's Hospital Reports*, which has just been issued, MR. CROFT again calls attention to the subject, and gives the details of two cases in which life was prolonged, respectively, for one hundred and eight, and one hundred and forty-nine days. In the latter, indeed, the subject might have survived some weeks longer had the tracheotomy-tube, which had been worn for seventy-three days, been sufficiently long to reach below the level of the growth which was pressing on the windpipe.

The five cases to which we have now referred, show conclusively that the œsophagus tolerates a tube indefinitely, and that alimentation by this means insures a prolongation of life, which it is too generally thought is attainable only by operative interference. More than this, not only is the procedure a perfectly safe one, but it preserves life much longer than cutting measures, the average existence of the five cases having been one hundred and seventy days, and is a far better result than has been afforded by gastrostomy, œsophagostomy, or internal œsophagotomy. Hence, when the œsophagus is pervious to a tube, this method of treatment should be tried before an operation is resorted to.

The early use of the permanent tube for alimentation is also indicated in cicatricial stricture of the thoracic portion of the œsophagus which resists dilatation with bougies, as well as in cases of compression of the canal by an enlarged thyroid gland, mediastinal glands, or carcinoma of the larynx. Whatever the cause of the trouble may be, a tube of medium size, say No. 17 or 19 of the French scale, should be selected, and be carefully and patiently passed, when it may be retained by a strip of plaster across the cheek. It should be changed every four or five days, and should be rendered aseptic before reinsertion to prevent the conveyance of putrefactive agents into the stomach. As the introduction of a tube by the mouth is far easier than by the nose, the former route should be preferred for a few days, or until the œsophagus has become accustomed to its presence, when it may give way to the latter, which is attended with less discomfort to the patient.

CONGENITAL DISPLACEMENT OF THE HEART.

AN interesting report on a case of congenital displacement of the heart has recently been made to the Academy of Medicine of Paris, by a commission composed of MM. Marey, Sappey, and Vulpian. The subject was a woman, and was the second which has been thoroughly studied in France. There was diaphragmatic hernia, the heart projecting through an opening in this muscle, and protruding under the skin of the epigastrium, where it could be seized with the hand.

The result of the examination is to confirm the prevailing views of the phenomena of the heart's action as determined by the study on animals. Thus it is proved that the impulse of the heart is systolic in time, and not diastolic, as was formerly claimed by many, and is still held by a few clinicians. It was also ascertained that, whatever be the derangement of rhythm, the two ventricles always coincide in their contraction. Such derangement was produced in the patient by emotional causes in a prolonged examination. The only difference demonstrated in the two ventricles was in the force of contraction, that of the left being of course the more energetic.

The position of the heart behind the sternum did not permit the accurate study of the auricles as compared with the ventricles. This was, however, done in a second case examined by MM. Paul and François-Franck, in 1877, wherein it was noted that the auricular systole immediately preceded the ventricular, which is also a confirmation of the results of the delicate experiments by Chauveau and Marey upon animals.

The confirmation, afforded by these rare cases of malposition, of the results of experimentation upon animals, adds another to the many reasons for continuing this practice, to which we are indebted for so much of our accurate knowledge in physiology.

THE NEW YORK COUNTY MEDICAL ASSOCIATION.

A LARGE number of the profession in the city of New York, desiring not to be misrepresented by the action of the Medical Society of the State of New York, and of the Medical Society of the County of New York, in reference to the Code of Ethics, have organized a new society under the title of "The New York County Medical Association," and have made the National Code a part of their by-laws. They have thus formally placed themselves in affili-

ation with the profession throughout the United States, and its representative body—The American Medical Association.

The first meeting of the new society was held last Monday evening under the most auspicious circumstances. There was a large and representative attendance, and the scientific work was inaugurated by an extremely valuable paper by Dr. Austin Flint, Sr., on the pathological and practical relations of the doctrine of the bacillus tuberculosis, which we have the pleasure of laying before our readers in full in this issue.

The new society will enjoy the confidence and best wishes of the profession throughout the country.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, December 11, 1883.

THE PRESIDENT, ROBERT F. WEIR, M.D., IN THE CHAIR.

TRANSVERSE WOUND OF EXTENSOR TENDON OF FINGER; SUTURE.

DR. A. C. POST presented a patient with the following history:

November 3, 1883, George Moore, aged nine years, was brought to my clinic, with the index finger of his left hand flexed at a right angle at the articulation between the first and second phalanges. The patient had no power of extension, although there was no rigidity of the articulation. There had been a transverse incision over the back of the joint five weeks before. The external wound had healed. I made a free longitudinal incision over the dorsal surface of the finger, and found the tendon divided transversely throughout nearly its whole breadth, there being a very narrow strip undivided on each side. The proximal end was full and loose, the distal end was somewhat atrophied, and adherent to the periosteum. I excised the margin of the opening, and then brought the divided ends together with fine sutures, after which I secured the finger in a position of exaggerated extension to a dorsal splint passing over the hand and forearm.

10th.—I dressed the wound, removed the sutures, and found the external wound almost perfectly united.

December 8.—On removing the dressings, I found the finger straight, and the patient had the power of flexion and extension. I did not, however, allow him to make extensive movements.

NEURALGIA OF SECOND BRANCH OF THE TRIGEMINUS.

DR. F. LANGE presented a patient, about forty years of age, a tailor, who suffered from neuralgia of the second branch of the trigeminus on the right side, which resisted for a long time the usual external and internal remedies and applications, until finally the patient submitted to an operation, which was performed in March, 1882, after the method of Leucke, modified by Braun and Lossen, and consisting in an osteoplastic resection of the zygomatic arch and bone, and finding the nerve in the depth of the spheno-maxillary fossa, at its exit from the skull, and besides a separation of the nerve at its exit from the infraorbital foramen, and extracting the anterior piece from the base of the skull to this point. He was unable to destroy the spheno-palatine ganglion, and so far the result had been permanent. Anæsthesia followed the operation immediately, and was complete also on the corresponding side of the palate. The patient at present has a certain kind of formication, which he describes like the crawling of worms, but has no real pain. The operation was performed by making a horizontal incision along the upper edge of the zygomatic arch, extending to the external angle of the orbit, and then a perpendicular one downward over the base of the zygoma, and with a fine saw separating the zygoma from its attachment to the superior maxilla, directing the saw so that the blade is more parallel to the sagittal plane, in order to prevent subsequent disfiguration through depression of the separated bone.

Then by bone scissors the arch was cut across half an inch in front of the meatus auditorius externus. This triangular flap of skin and bone was pulled downwards, and then the spheno-maxillary fossa laid open, the temporal muscle drawn backward, and the nerve found after some adipose tissue had been pulled aside or removed. In the patient presented, the operation did not offer any peculiar difficulty; but Dr. Lange presumed that it was probably on account of his lack of fat, and could readily conceive that sometimes in stout, fleshy persons the operation might be very tedious. He was able to see the internal maxillary artery, but had no disagreeable interference by hemorrhage. The wound healed entirely by first intention, and, as an accident, the rubber drainage-tube was healed in. After a time, the tube was cut out. The result, so far as disfiguration went, was rather gratifying, and also with respect to the recurrence of the disease. Dr. Lange did not think that any other operation afforded the possibility of excising the nerve to so great an extent and with so little danger and disfiguration as the one described. For some time the patient had slight difficulty in opening his mouth in consequence of inflammatory contraction of the temporal muscle, but at present he has no difficulty which prevents him from taking his food, though the excursions of the jaw are not normal yet. The little wound by which the nerve was exposed at its exit from the infraorbital canal had hardly left a visible scar.

DR. BRIDDON asked what objection there was to performing the anterior operation first, and reserving the more extensive operation in the spheno-maxillary fossa for a return of the disease.

DR. LANGE said that he did not regard the operation as a severe one.

DR. BRIDDON remarked that he saw the more extensive operation performed several years ago, and it was exceedingly tedious and very unsatisfactory, as he thought. He was unable to state what the result was.

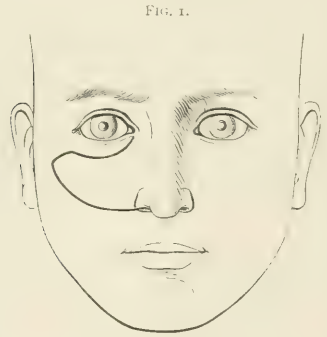
DR. A. G. GERSTER then read a paper on

OSTEOPLASTIC RESECTION OF THE UPPER JAW FOR PROSOPALGIA, WITH THREE CASES.

Total extirpation of the upper jaw, as a preliminary measure for facilitating the removal of massive nasal

polypi, was first successfully done by Syme, in 1832 (*Ninth Report of the Edinburgh Surgical Clinic*), and having been adopted by the then reigning French school of surgeons, remained the standard measure in the operative treatment of the above-mentioned disorder. The happy idea of a more conservative procedure was first conceived, and successfully executed by von Langenbeck, in the year 1859 (*Deutsche Klinick*, 1859, p. 471), when he extirpated a large retro-nasal polypus through an aperture made by what he designated an osteoplastic resection of the nasal process of the superior maxillary and the os nasi. The ease afforded in the removal of the polypus by this step, and the primary healing in of the resected parts led to further trials, and, in 1861, another more extensive and also successful case was reported by von Langenbeck in the *Deutsche Klinick* (1861, p. 281). This case consisted in the temporary removal of the superior portion of the upper jaw, without injuring the hard palate, the alveolar process, or the velum palati, followed by the excision of a large fibroid of the pterygo-palatine fossa. The steps of the operation were as follows: A curved incision, its convexity looking downward, commenced in the nostril, and extended outward and upward to the middle of the malar bone, the periosteum being divided at one stroke. The masseter was cut away from the edge of the zygomatic arch, and the buccal fascia was divided. The lower jaw was now drawn aside, and the tip of a keyhole saw being introduced into the pterygo-palatine fossa, the upper jaw was sawn through horizontally above the alveolar process, the cut through the bone following the line of the cutaneous incision to the nostril. A second incision, commencing at the nasal process of the frontal bone, was carried outward along the lower margin of the orbit, to join the first incision at the middle of the malar bone. Now the orbit was entered, and the eye-

FIG. 1.



Showing the cutaneous incision.

ball pushed up; then the frontal process of the malar and the zygomatic process of the temporal divided; finally the orbital plate of the superior maxillary severed transversely as far as its junction with the lachrymal bone. Thus, the resected jaw remained attached by skin and periosteum only to the nasal bone and the nasal process of the frontal bone, and could be easily pried out of its bed by the aid of an elevator, the above-mentioned uninjured parts serving as a sort of hinge. The tumor was readily removed; the profuse hemorrhage ceased spontaneously, only one ligature, that of the spheno-palatine artery, being required. The resected parts were now replaced, some difficulty being met with in overcoming their tendency to protrude. Wire sutures and a compressory bandage finally effected this end. The cutaneous incision healed almost entirely by adhesion; the bone was found to be immovable on the eighteenth day after the operation.

The value of this truly conservative idea was soon recognized, the operation became well established, and was quite often executed by various surgeons in Germany.

The first one to widen the field of this procedure was Nussbaum, of Munich, who, in 1863, had to deal with an obstinate case of supra-infraorbital neuralgia, of traumatic origin (A. Fr. Bratsch, *Bayer. Intelligenzblatt*, 1863, p. 461, Case No. 13) in a woman of thirty-eight years. Numerous neurotomies of both the supra- and infraorbital nerves had been performed during the five years preceding her admission to Nussbaum's clinic. In the course of the subsequent two years the cicatrices were repeatedly excised without improvement; finally, the common carotid was deligated, the ascending ramus of the lower maxilla was trephined in order to permit of the exsection of portions of the inferior alveolar, the mental, the mylo-hyoid, and lingual nerves. This led to necrosis and removal of the ascending ramus, but produced a pause lasting five months, after which a relapse occurred, for which von Langenbeck's osteoplastic operation was performed, with temporary success, the observation not extending over more than a few months.

The adaptation of this operation to neurectomy did not attract any attention—at least found no imitators. Billroth, then of Zurich, having excised, in April, 1864, a piece of the infraorbital, one inch and a quarter long, in what he designated "the ordinary manner"—by which Malgaigne's method is meant—and the patient's sufferings not being alleviated, conceived the idea of exsecting the mentioned nerve from the foramen rotundum forward, by the aid of von Langenbeck's osteoplastic operation. He believed himself to be the first one who had thought of this plan; but on studying up the history of neurectomy, he found that Carnochan, of New York, had preceded him in carrying into effect a similar plan; and also Nussbaum, in executing the identical procedure which Billroth had thought of. Griesinger, who felt a personal interest in the patient, was deterred by the operation, and merely advised the removal of some sensitive portions of the corresponding alveolar process, which was done accordingly in May, 1864. The operation was followed by a quiescence of the attacks extending over ten months. The affection reappeared then, and in February, 1866, Billroth's original plan—osteoplastic exsection of the superior maxilla—was successfully performed, and the nerve was cut away close to the foramen rotundum. The operation can be done in an exact manner, without serious hemorrhage. The wound healed kindly. The exsected nerve was found to be fully regenerated, and in every respect normal. Meckel's ganglion was not removed. In the ensuing months of April and May, branches of the third division of the fifth pair became the seat of neuralgia, and required sections of the buccinatorius and mentalis nerve. In July, 1867, the common carotid was

deligated, with temporary benefit, this lasting till January, 1868, when another relapse drove the patient into Niemeyer's clinic at Tübingen, where the constant current again relieved him. Here the history stops.

From Billroth's case up to my three operations, no mention of the method as adapted to neurectomy is found in literature.

The late Professor Wagner, of Königsberg, in Prussia, devised the simplest and least incisive method by which the foramen rotundum can be exposed. He entered the orbit and laid bare its floor, then pried off the lamina of bone serving as a roof to the infraorbital canal; then, by a suitable hook, he raised the nerve out of its bed from alongside of the uninjured artery, and following it up towards the round foramen, cut away successively all its branches, and finally the trunk. The integrity of the antrum was thus preserved, yet phlegmon and erysipelas set in in almost all of Wagner's cases. This circumstance puzzled him a good deal, and he attributed it to neuro-paralytic influences. That the operation is difficult and unusually subtle, on account of the confined space, is evident. In cases of a narrow and deep orbit, or where the artery was unfortunately injured, it became almost impracticable, as one of Wagner's own cases (No. X.), König's case, and a third case demonstrated, which I had an opportunity to witness here in 1878. It must be conceded, however, that Wagner's final results, as regards the tardiness of the relapses, were very good.

The second method to be considered is that devised by Carnochan, of New York. It has its merits, but it labors under the disadvantage of also affording, in cases of a small proportioned facial skeleton, insufficient space for a sure removal of the entire nerve. Aside from the circumstance that a portion of the superior maxillary must be sacrificed in this method, it is undeniably excellent in suitable cases, and where a large trephine can be employed, it gives plenty of space and light.

As the third mode of procedure I have to mention Brun's plan of resecting the malar bone, dividing the muscles presiding over mastication, and thus approaching the nerve from the temple. It is in many ways unsatisfactory and mutilating, like Carnochan's operation, the wound is narrow and deep, and manipulation of the nerve very difficult. Yet a respectable number of cases have been operated on in this manner with fair success.

As an important modification of Brun's method, Leucke's procedure has to be mentioned, in which the malar bone is not sacrificed, but only temporarily exsected and turned aside, thus admitting the operator to the temporal and pterygo-palatine fossæ. Especially in the presence of a deep layer of adipose tissue and of large masticators, the wound must be very inaccessible.

As the fourth and last procedure, we have to mention preliminary osteoplastic resection followed by removal of the entire nerve. None of the preceding methods can compare with this as regards the space and light it affords, and the ease with which the infraorbital nerve can be removed in its entirety. It sacrifices no part of the superior maxilla, and, as statistics prove, is not more dangerous than any one of the preceding methods. With a few modifications, it deserves to be employed in cases not suited for Wagner's method, and merits further trial and development as applied to the alleviation of the terrible sufferings of prosopalgia. Advisedly, I do not use the word "*cure*," since love of truth compels me to admit that our ability to cure prosopalgia is just as uncertain as the knowledge of its pathology is unsettled and unsatisfactory.

The cases as observed by me were the following:

Case I.—Peter Deuker, æt. 36. His trade, that of an oven-builder, necessitates his frequently entering bakers' ovens to make repairs. On emerging from a very hot oven, he is liable to be exposed to sudden changes of temperature. He said that he had been suffering off and on for eighteen years. In 1877, neurotomy in front of the right supraorbital foramen was performed by a surgeon with temporary benefit. Large doses of quinine and salicylic acid also modified the attacks, inasmuch as they became shorter and less severe. In 1878, a remission of three months was brought about by a number of subcutaneous injections of one ninety-sixth of a grain of aconitine, repeated every two hours. At the end of this period mild attacks recommenced, first at long intervals, later more frequently; the hypodermic use of morphine was resorted to, until the patient had become a confirmed morphine eater. The attacks had become more frequent and more severe in spite of the anodyne, and his family attendant directed him to the Mt. Sinai Hospital, where he was admitted May 10, 1881. I found on a well-built frame a somewhat flabby skin and muscular system, the internal organs normal, the patient anxiously avoiding motions of the jaws. On the slightest provocation, such as articulation, chewing, swallowing liquids, or touching any portion of the cheek or lip, the patient's face became distorted and cyanotic, his left eye bloodshot with a copious flow of tears, and while his hands were pressed nervously to the anterior surface of the upper jaw, his body was bent low down, and a number of deep moans escaped his chest. The attacks lasted from thirty seconds to two minutes. There were two painful spots; one exactly over the left foramen infraorbitale, the other at the naso-labial junction. The teeth of the upper jaw were the seat of strong irradiating pain during the attack; the lower jaw and tongue were also somewhat affected this way; the palate was free.

Immediately on admission, treatment by the constant galvanic current was instituted, but did not produce any notable effect; hence, after forty-eight hours' preparation, an exsection was resolved upon, the anamnestic signs pointing to a neurosis, of a peripherical origin, the presumable seat of the affection being in front of the superior alveolar branch of the nerve-trunk.

In selecting the method by which this end should be accomplished, the difficulties encountered in a case of Wagner's operation, witnessed by me, were very vividly remembered. Flooding of the field by blood, soiling of the speculum—hence want of light and space, and especially the impossibility of actually following up and exposing to view the central end of the nerve situated between the foramen rotundum and the infraorbital canal, led me to abandon this method.

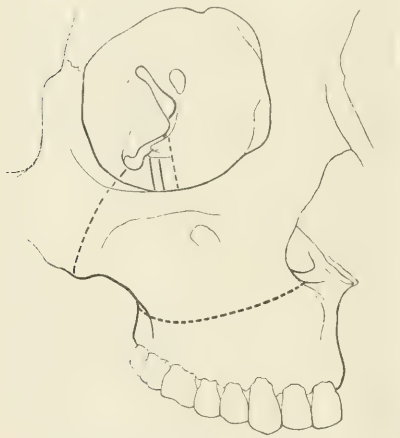
The objections to Brun's or Leucke's procedures were also great. The powerful masticators of the patient promised to give a good deal of trouble, causing a very deep wound, the possibility of injuring the internal maxillary artery in which, and the ensuing difficulty of dividing the nerve with any amount of certainty, caused me to abandon these methods also. Compared with Carnochan's operation, the temporary resection had the advantage of not mutilating, of giving decidedly

more space, and hence more certainty of accomplishing the chief end of the operation—that is, certain removal of the possibly longest piece of the nerve.

The circumstance that the method was not much tried as an aid to neurotomy was rather an incentive than anything else to new trial, and to a widening of our experience in the treatment of such an intractable disease as prosopalgia.

Accordingly, on May 12, 1881, the operation was performed, strictly after von Langenbeck, as far as the incisions are concerned, with one modification. In studying the bearings of the operation on the object in view, I found that the section through the frontal temporal processes of the malar bone could be advantageously substituted by a simple division of the middle of the malar bone. The injury would be lessened, and yet ample space would be afforded for attacking the nerve. In addition to this, the infraorbital foramen being exposed, the nerve was divided about two-eighths of an inch in front

FIG. 2.



Showing lines of section by the keyhole saw.

of it. In sawing through the superior maxillary, the hemorrhage was considerable, especially when the nasal mucous membrane was severed, but never alarming, and ceased spontaneously. No difficulty was encountered in turning the resected block out of its niche, and the nerve was seen to slip easily out of the infraorbital canal, and was lying at full length on the bottom of the wound. The alveolar and dental branches had been necessarily torn off. The trunk of the internal maxillary could be seen pulsating in the posterior part of the wound, covered by the periosteum stripped off the tuberosity of the maxilla. To expose the foramen rotundum fully, standing portions of the orbital plate of the maxillary bone had to be removed by forceps, then the nerve was grasped, and easily cut off close to the foramen. No ligature was required. The parts having been thoroughly mopped with an eight per cent. solution of chloride of zinc, were easily replaced, and the cutaneous wound closed with catgut sutures. A small drainage-tube was passed into the spheno-palatine fossa, leading out beneath the zygoma. No dressings were applied. Anæsthesia—by chloroform—was never full, except while the first incisions were made, and the blood entering fauces and larynx was readily expectorated. The length of the exsected nerve was one inch and seven-eighths; the time consumed, one hour.

On recovering, the patient at once touched his cheek, and was delighted at the absence of pain. Anæsthesia of the corresponding parts was present; the return of sensation was ascertained on the fifth day about the ala nasi, on the twelfth over the foramen. Bloody serum oozed out of the tube for about a week, then gradually the discharge became sero-purulent, and scanty, so that the tube was removed by the end of the second week. No fever and no local reaction followed, and the cutaneous wound healed by adhesion. The resected part had become immovable in the fourth week. The neuralgic attacks ceased immediately after the operation, and the patient was discharged from the hospital to resume his occupation. In the winter of 1882–83 slight attacks commenced to manifest themselves again, about once a week, the point of the most intense pain being the upper lip, near the ala nasi, and the irradiation to the teeth of both upper and lower jaws of the right side more marked than ever before. I directed the patient to a neurologist for treatment in May, 1883, but both medical and galvanic therapy proving quite futile, and the attacks gaining in violence, the patient implored me to relieve him by an operation. It seemed pretty certain that extensive regeneration of the nerve must have taken place, the dissection of which out of the cicatrix in which it needs must be embedded, promised to be a difficult task. Weighing all the circumstances, Carnochan's procedure seemed to promise most success, enabling me to expose the entire length of the infraorbital canal and Meckel's ganglion. Being readmitted, the patient was put under the influence of chloroform on June 16th, and a crucial incision exposing the foramen infraorbitale, a number of threadlike nerves were found to radiate from it. The antrum being opened by the aid of the trephine, the infraorbital canal was exposed, and a slender, irregularly shaped cord of varying diameter could be dissected out of it. The posterior wall of the antrum was broken out with a fine chisel, and Meckel's ganglion, together with the internal end of the nerve, was exsected with forceps and scissors. The removed cord proved to be composed of nerve tissue. To make sure of the destruction of the nerve as far as possible, the blunt point of a thermo-cautery was inserted into the foramen rotundum and the parts thoroughly seared. The patient recovering, complained of constant violent pain in the jaw, although the skin was found to be quite anæsthetic. In spite of a free use of hypodermic morphine injections, he spent a wretched night, the attacks being now more frequent and violent than ever, the intervals between them never exceeding five minutes. This gloomy aspect of the case continued till the discharge from the wound, which was lightly filled with iodoform gauze, commenced to be unmistakably purulent, which took place on June 19th. The highest temperature—100.5° F.—was recorded at this date, and the night was spent tolerably well, with two injections of morphine. The two nights following

the 19th were spent comfortably with the aid of one injection of morphine. On the morning of the 21st several sharp attacks were noted. Two more attacks came in the evening of June 22d, requiring an injection. Day and night of the 23d were spent painlessly and very comfortably, no morphine being required. The discharge from the deep part of the wound was purulent and copious, but the skin was never inflamed. From this time on the case did well, the attacks not returning. By July 16th there remained only a fistula, into which a probe could be still passed to a distance of two and an eighth inches. Very light formication, with tenderness, appears once in a while in the course of the second branch; lately the patient had some pain in the course of the third branch.

Case II.—Catharine Diemer, widow, æt. 42, admitted to the German Hospital, January 2, 1882. She is stated to have suffered from paroxysms of intense pain in the upper lip and the right alveolar process for two years, no cause for the same being known to her. She had all the teeth of the right upper jaw extracted one after the other, although they were sound. All this had no influence on her sufferings. The pain radiated into the ear; she never had had otorrhœa. She had been under treatment for three months in the German Dispensary for a circumscribed necrosis of the alveolar process of the second malar, undoubtedly due to the last tooth extraction. The sequestrum was removed when loose, and a fistula leading into the normal antrum was found. The alveolar process had become much atrophied, and was seen to be invested by normal mucous membrane. Dr. Gruening kindly consented to examine her ear on January 6, and found a normal drum, no perforation; acuteness of hearing slightly diminished, pointing to a chronic otitis media; the Eustachian tube free. The necessary incidental manipulations did not produce any attack. Probing of the antrum by the fistula, touching of the alveolar process, and chewing always caused acute pain, which, however, was also liable to occur spontaneously, especially at night. All other resources being exhausted, a neurectomy was decided upon, and was carried out in the German Hospital on January 19, almost in the same manner as in the first case. Profound ether anæsthesia was maintained only while the cutaneous incisions were made. Owing to their slight proportions, the sections through the facial bones were easy and rapid, the hemorrhage at first somewhat copious, but ceasing spontaneously. In the light of the experience gathered in my first case, the division of the orbital plate of the superior maxillary was so modified as to run in the antero-posterior line, from a point of the infra-orbital margin midway between the lachrymal duct and the infraorbital canal, backward and parallel with this canal to the inferior orbital fissure. Thus injury to the nerve and the lachrymal duct was avoided, and the slight tuberosity marking the inner side of the posterior end of the infraorbital canal, the chief obstacle to a free exposure of the spheno-maxillary fossa was gotten out of the way. On turning out the resected mass, the nerve was seen to slip easily out of its canal, and could be readily followed to and cut away at the foramen rotundum, the removed portion measuring one inch and three-fourths. The hemorrhage was throughout controlled by short compression. The wound was closed by catgut sutures, and capillary drainage of the spheno-maxillary fossa by a few strands of catgut was employed. The cutaneous incision healed throughout by adhesion; the place where the catgut drainage lay, continued to discharge a slight amount of serum for two weeks, then closed. Anæsthesia was fully established immediately after the operation, but the time of the return of sensibility was not marked. The attacks had ceased, and did not return till March, 1883, when she again complained of pain in the upper lip, the attacks being of a mild character and of short duration, and easily controlled by small doses of morphine.

Case III.—Jacob Kahn, dry-goods clerk, æt. 63, a well-built and well-preserved man, who was unable to name a cause for his complaint. The first series of severe attacks of facial pain occurred in November, 1879, and lasted for four weeks. Its seat was at the point of exit of the left infraorbital nerve on the face, the pain radiating into the upper teeth, the lower eyelid and left ala nasi. It was reduced by local injections of morphine, and a pause of three months followed. Since the spring of 1880, the paroxysms became somewhat more frequent, were most easily produced by mastication, but were controlled by morphine. In the spring of 1882, the attacks grew more severe, and the patient sought relief in an institute established for the treatment of nervous complaints, where he was subjected to a prolonged course of medicinal and galvanic therapy; but no improvement following he became discouraged, and having been admitted to my ward at Mt. Sinai Hospital, begged for operative relief.

The attacks were most severe in the evenings, were readily produced by touching the lower eyelids; there was a punctum dolens a little above the foramen infra-orbitale. The upper teeth and palate were free, irradiation of the pain being noticed only along the track of the supraorbital nerve. In the absence of any signs pointing to a central cause, exsection of the nerve was decided upon, and carried into effect on August 30, 1882, under chloroform. The steps of the operation did not differ from those in Case II., except that the massive frame of the patient's head made the bone-sections rather laborious. The hemorrhage was about the same as in the former cases up to the moment when the saw, having cut through the entire superior maxilla, entered the nasal cavity, when it suddenly became very profuse. Ice-water was thrown into the nares, but failed to check the hemorrhage, wherefore it was decided to hasten the remaining steps of the operation. The malar bone and orbital plate of the superior jaw were quickly divided, and the resected parts were turned out of their bed, and then the source of the profuse hemorrhage became apparent in a laceration, by the saw, of a very turgid erectile body, covering the turbinated bone. The thermo-cautery soon converted this erectile tissue into a dry eschar, and the operation was finished in the usual manner. The time consumed was forty minutes. Meckel's ganglion and one inch and a half of the nerve were removed. Catgut sutures, drainage, and a light compressive dressing completed the work. The operation was followed by prompt relief, and the cutaneous wound healed by first intention, no fever appearing, but the nose continued to discharge pus for a considerable time, and finally the skin became reddened over the line of section through the malar bone. A small puncture in the cicatrix being made, about three weeks after the

operation, the probe detected a rough surface; and subsequently, in January, 1883, a sequestrum corresponding to the temporal side of the section was extracted, the defect being marked by a deeply retracted cicatrix. Up to date, the patient remained free from facial pain.

Dr. Sessel kindly examined the nerve removed from Case I. at the first operation, and also that from Case II., and found both normal in appearance. In Case III. the specimen was lost. The proposed modifications, that is, sawing through the middle of the malar bone instead of dividing the frontal and temporal processes of the same, then, instead of Langenbeck's transverse, an anteroposterior (sagittal) section through the orbital plate of the upper jaw on the inner side and parallel to the infraorbital canal will shorten the operation and will materially increase the facility of access to the most central portion of the nerve.

It is far from my intention to urge the propriety of this operation in every case of supraorbital neuralgia, and the report on the three cases in this paper was rather inspired by the desire of testing the value of a somewhat untried procedure, and to increase the number of available means for combating a treacherous enemy. As long as the true nature of prosopalgia remains unknown, the employment of any means, and of every means, must be fair and permissible, however empirical and unscientific they may appear to be.

DR. F. LANGE would merely say that, starting with the principle to cause as little lesion as possible, he thought the certainty with which prompt union of the wound could be expected was greater in Leucke's operation than in the one which Dr. Gerster had described, because any septic influence which may follow opening of the nasal cavity and its appendages is excluded. He also thought that the thoroughness with which the surgeon was able to remove the branches of the nerve after its exit from the skull, was greater in Leucke's operation than in the one described by the author of the paper. It seemed to him that it must be quite difficult from the front to reach with certainty the sphenopalatine ganglion, although he had had no practical experience in the method. Finally, in comparing the result of the operation in the patients presented, from a cosmetic point of view, one must evidently decide in favor of Leucke's operation.

DR. T. M. MARKOE said that his experience had been limited to a single case, and in which he performed the operation through the antrum. He found no difficulty in detaching the nerve from the canal in which it lies in the superior maxillary bone, and, holding the nerve with a pair of forceps, he was able to trace it back with the end of the scissors, and succeeded in cutting off the nerve not so far back as the foramen rotundum, not so far back as the point where the two short branches go to Meckel's ganglion, but close to that point, and he felt that he cut off the nerve posterior to the two posterior dental branches, those in which relapse would seem most likely to take place. The operation was difficult and very tedious by reason of inability to get light at the bottom of the cavity, nevertheless, he felt quite sure that he cut the nerve at the point mentioned. The result was extremely satisfactory, but the entire case impressed him unfavorably concerning neurotomy in these cases. The case began as one of neuralgia of the inferior maxillary nerve, for the relief of which he trephined the inferior dental canal some two years before, and removed about one inch of the nerve, and the cure was satisfactory. After a few paroxysms the pain entirely subsided, but finally it returned in the second branch, the infraorbital, and it was for the relief of this relapse that he performed the operation on the superior maxillary nerve above described. The patient was entirely relieved by this second operation, and Dr. Markoe saw nothing of him for nearly three years, when he returned, saying that he had not had pain in the region of the distribution of the infraorbital nerve, but was then suffering intensely from supraorbital neuralgia, and refused to take any further chances of recovery by operation. In other respects the patient was entirely healthy, and there was no reason to suspect that the affection had a central origin.

DR. GERSTER then presented the patient, upon whom he operated in May, 1881, and he said he was aware that this method would have to be rarely employed, but as it may be useful in another instance, and is adapted to the removal of the second branch of the trigeminus, he thought it was worthy of the effort which it requires. That was the only object which he had in bringing the operation forward. He was sure that Luecke's method was preferable in many cases, while in other cases Carnochan's method would be the better one to resort to; but there must be cases where the method which he had described will be the best, either as the first operation to be performed, or as the last resort.

As regards the question of the healing of the external wound, since the introduction of antiseptics this was a question of much less importance than formerly. The omission of opening the antrum is not of much advantage, as already shown by Wagner's experience, which, to be sure, was gained before the days of antiseptic precautions. What seemed to him most curious was the circumstance that, after having removed the entire nerve from the infraorbital canal, sensation returns so quickly in those parts which are innervated by the second branch. Perhaps this may be explained by some filaments of sensitive nerve passing back by way of the vidian nerve to the facial, and thus distributed to the skin of the face.

DR. W. S. HALSTED remarked that in the reproduction of almost the entire superior maxillary nerve, the infraorbital canal might play the part of the "tubular suture" of Gurlt and Vinlair; the divided ends occupying a so-called "virolage."

DR. J. W. HOWE was unable to understand the advantages which the operation described by Dr. Gerster had over that performed by Dr. Carnochan.

DR. GERSTER said the chief advantage which the operation had over all other operations was that it gives a great deal of space and light, and taking all the cases together as they come, it afforded better opportunity for manipulation in the bottom of the spheno-maxillary fossa.

DR. HOWE thought that there could be no great difficulty in dissecting out the branches of the nerve in Carnochan's operation, and cited one case which he had last winter. The only difficulty which he experienced was in determining whether or not he had to deal with Meckel's ganglion, and he asked whether there was any special appearance or condition by which Meckel's ganglion could be distinguished from a little mass of

cellular tissue and bloodvessels. The case in which he operated was one of seventeen years' standing, accompanied by spasmodic contraction of the muscles of the face. The pain was relieved very much for two weeks after the operation, and it then returned, but without spasm. A drainage-tube had been passed through the canal, and this was injected with a strong solution of chloral, which diminished the pain, and since that time the patient has been comparatively free from suffering; at least, has not had any violent pain whatever.

DR. LANGE said that in the patient presented it was rather easy to trace the branches arising from the trunk of the nerve down to the spheno-palatine ganglion, probably because the patient was a very favorable one so far as a scanty amount of fat was concerned. It seemed to him also that the nerve, so far as it had been exposed in the cadaver presented by Dr. Gerster, was not reached so immediately at the foramen rotundum as it was possible to do in Leucke's operation; and it also appeared to him that a few of the thin branches of the nerve were passing down, which might be easily overlooked, and the nerve cut just in front of these fibres, and in that way the operation be performed less thoroughly.

THE PRESIDENT said that three years ago he had opportunity to present to the Society a case of persistent infraorbital neuralgia which had been cured by Carnochan's operation. The patient was seen two years afterward, and there had been no return of the pain. In this case, Wagner's operation had been previously performed by Dr. Seguin, who had had the patient under treatment for a long time. The first operation was accomplished without difficulty, and the nerve was divided probably not much further back than the posterior margin of the orbital plate. The patient was relieved for a time, but as there was a recurrence of the symptoms, an opening was made by him into the antrum with a chisel, and the inferior wall of the canal opened up by means of slender scissors, and the posterior wall of the antrum broken through by the blunt end of the same instrument. The remains of what was supposed to be the nerve, but which proved to be cicatricial tissue, to which the posterior portion of the nerve was attached, was seized with the forceps and held taut, and by means of a little, forked, blunt hook, carried onward to the foramen rotundum, the nerve was traced out and there divided with scissors. The operation was aided very materially by the use of reflected light from the head-mirror. Healing was rapid, and no constitutional reaction took place, and the deformity following the operation was very trifling, indeed. In fact, he thought that the more severe osteoplastic operation should be reserved for the more obstinate cases. Carnochan's operation has advantages over that described by Dr. Gerster or Leucke in ease of performance, freedom from hemorrhage, and lessened deformity. He could conceive of the possibility of necrosis occurring after both the osteoplastic operations, and also the possibility of mastication being interfered with in Leucke's operation. Under such circumstances, Carnochan's operation should be the first to be resorted to.

The question raised by Dr. Howe is a pertinent one. The ganglion cannot always be recognized. Dr. Weir was unable to recognize it in his case, and other surgeons had been unable to recognize it, although the extraction was accomplished, as shown by paralysis of the palate immediately after the operation.

The President also thought it a point worthy of note that one of Dr. Gerster's cases proves the possibility of a good deal of hemorrhage which interferes with seeing the different anatomical structures.

DR. LANGE remarked that one advantage which Leucke's operation possessed was, that hemorrhage is quite insignificant, and also the disfiguration is very much less than that left after any of the other operations. He would emphasize the statement that Leucke's operation involves much less surgical interference than does Carnochan's, or that by temporary excision of the jaw. There is, in fact, only the lesion of the zygoma, which is comparatively unimportant. So far as he knew, the process of healing had been favorable.

THE PRESIDENT asked if suppuration and inflammation should occur, would there not be more or less impairment of the muscles of the jaw?

DR. LANGE said he should think so, and that in some cases a certain degree of difficulty in mastication had followed the operation, but not sufficient to make it especially uncomfortable for the patient.

DR. T. M. MARKOE said that in thinking of these cases for many years past, he had been strongly impressed with the feeling that if it could be shown that these most severe and more radical, more perfect operations for neurotomy, were certainly successful in curing the disease, then they would be justifiable, but his impression was that the operations which had been described by Dr. Howe, and by himself, were very much less dangerous, less severe, and produced results which at least would compare favorably with those which had been recorded of the more severe operations referred to by Dr. Lange and by Dr. Gerster. It may be a less perfect operation, but he could conceive that if the scissors fell outside of the posterior dental nerve, all had been accomplished that could be done by exsection of the nerve, and he did not believe that it is necessary to destroy Meckel's ganglion. His own feeling had been that these severe operations did not offer so much better prospect of success as to justify their performance, but at the same time he did not wish to dogmatize upon the subject.

DR. H. B. SANDS said that within a year he had had occasion to perform Leucke's operation, not for the purpose of curing neuralgia, but with the intention of removing a tumor which was supposed to be situated in the spheno-maxillary fossa. The tumor was found where it was supposed to be, but was so extensive and so firmly attached that the operation for its removal was abandoned as impracticable. In that case the wound did well, and the bone became consolidated without necrosis. There is now noticed—about nine months after the operation—considerable difficulty in opening the mouth; but he believed this not to be due to the operation, but to an increase of the size of the tumor. He was certain that the operation proposed by Dr. Gerster, as well as the one referred to by Dr. Lange, excelled all other operations in the ease and certainty with which the parts lying in the spheno-maxillary fossa were exposed to view. Many years ago he performed von Langenbeck's operation, for the removal of a tumor situated in the spheno-maxillary fossa, and found that the end was accomplished without difficulty. He

should think the nerves in the same region might be removed with equal ease.

DR. E. L. KEYES reported

A CASE OF DEATH BY ETHER,

occurring in a colored boy, upon whom he was operating in Bellevue Hospital for exsection of the knee-joint. The patient was about twelve years old, and was apparently in perfect health, except the disease of the knee, which had existed for a number of years. He took the ether at the hands of one of the house staff, and there was no untoward symptom for an hour or more. Dr. J. D. Bryant was present, and after the operation was substantially completed, he felt the patient's pulse, pronounced it excellent, and left the room. About a minute later, the gentleman who was administering the ether said that something was wrong, called attention to the fact that the boy was breathing faintly, and that the pulse had disappeared from the wrist. Dr. Keyes at once resorted to all the usual measures for resuscitation, such as hanging the head over the table, artificial respiration, hypodermic injections of ether, ammonia, brandy, faradization of the diaphragm, strapping the extremities, etc., and these efforts were continued for forty-five minutes, but without avail, as the boy was dead. Dr. Keyes thought that the boy was probably dead before he had time to resort to any measures for resuscitation. The autopsy was made by the house surgeon, who reported that all of the organs were normal. All the internal organs were intensely congested, and the heart was empty, having stopped in systole. The ether used was that manufactured by Powers & Weightman. The quantity was nearly one pound. There was no mucus in the larynx. The patient had not vomited or attempted to vomit; everything seemed to be going on nicely, when suddenly death occurred by the heart.

DR. LANGE said that the only sad experience with ether he had ever had was in a female patient upon whom he had operated for strangulated umbilical hernia. She had a weak heart at the beginning of the operation. A fit of vomiting occurred; the heart's action ceased, and also respiration. Tracheotomy was immediately performed and the trachea sucked out, but life was extinct.

DR. SANDS thought it important to distinguish between those cases in which death occurs slowly from asphyxia and those in which it occurs suddenly from cardiac paralysis. In the latter class of cases it seems doubtful whether there would be time to resort to any measures for restoration, as death takes place sometimes almost instantly. If transfusion could be done in time, it would be indicated in some cases. He recalled two cases of death from ether which occurred in the New York Hospital. One case was that of a stout, healthy man, who, in the use of a pruning-knife, accidentally wounded his right carotid artery, and nearly lost his life upon the spot from profuse hemorrhage. He was brought to the hospital in a state of exhaustion. Dr. Willard Parker immediately came to see him, called a consultation, and proceeded to expose the injured vessel. In that case Dr. Sands remembered that he had his finger upon the patient's pulse, which became imperceptible immediately after the incision had been made through the skin. The operation was suspended for a few minutes; some restorative was given, the pulse was again felt, and the operation was proceeded with. Then a second time the pulse stopped, the face became pale, respiration ceased, and all attempts at resuscitation proved unsuccessful. In that instance death was due to the excessive action of the ether upon a heart already enfeebled by loss of blood, and therefore it might perhaps have been averted by a preliminary transfusion.

The other case occurred in the service of the late Dr. Allin, who was about to remove a tumor of the upper jaw from an old woman. The patient was in the sitting posture, and in that case also, although the face had become somewhat livid from ether, just after the incision was made through the skin, before much blood escaped the pulse stopped, and the heart's action was not resumed. The suddenness with which death occurs under such circumstances is very appalling, and seems to give little encouragement for the employment of any attempts to restore animation. He believed that in Dr. Keyes's case death had already taken place when failure of the pulse was noticed.

THE PRESIDENT said Dr. Allin's case excited a great deal of attention at the time, and observations determined that many of the deaths from ether occurred in connection with operations about the jaw and neck. This fact subsequently received a more scientific explanation from Schiff, who showed that when animals were anæsthetized, pinching the neck would arrest the heart's action and respiration. Still, it was well known how safe ether is; while chloroform kills one in twenty-five hundred, ether kills only one in twenty-five thousand. Perhaps this low mortality with ether might be explained by the fact that were it not for the warnings which ether gives, by stertor, etc., death would take place more frequently than it does.

DR. POST said that the only two fatal cases which he had seen with the administration of ether were those in which operations for the removal of tumors of the neck were being performed, which caused considerable embarrassment of respiration. There was no blood nor vomited matter to account for the fatal termination.

The PRESIDENT added another case which came under his observation while he was an interne in the New York Hospital—that of a double incarcerated scrotal hernia of immense size, which could be previously partially reduced, though usually filling the scrotum. The house-surgeon gave ether, and forced up the contents of the hernia into the abdomen, and the man ceased to breathe. Nothing was found on the autopsy to explain the sudden death, and the fact that the abdominal cavity was compelled to receive more than it was accustomed to, and thus the action of the diaphragm interfered with, was received as the probable cause.

DR. L. M. YALE referred to a collection of seven thousand cases of anæsthesia produced in one of the English hospitals, and in all the instances where alarming symptoms had occurred it had been noticed that the patients who had been rolled upon the left side recovered, while those who were rolled in the opposite direction died. Whether or not this was a general law was not stated, and he was unable to say.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, January 14, 1884.

THE PRESIDENT, WILLIAM DETMOLD, M.D., IN THE CHAIR.

THE First Stated Meeting of this Society was held last Monday evening, at the College of Physicians and Surgeons, New York. The first business in order was an

INTRODUCTORY ADDRESS

by THE PRESIDENT, in which he remarked that in welcoming the gentlemen present, he supposed it would be proper to state the object in view in the formation of the Association. It was well known that in the profession in New York there was going on a conflict which partook somewhat of the nature of a family quarrel; and family quarrels—like religious wars—were proverbially bitter and fruitless. The religious war of the Reformation in Germany lasted for thirty years, and then came to an end only because each side was exhausted. Yet it was a fact that neither party had gained anything by the conflict. He wished to state at the outset, however, that this Society did not intend to carry on the warfare in the profession. A large and respectable proportion of the medical men of New York reverently adhered to the Code of Ethics of the American Medical Association; and even admitting, for the sake of argument, that there might be some defects and shortcomings in it, they were not willing to abandon it. The opposite party was bent on destroying or emasculating this Code, which we earnestly desire to preserve. There might be honest differences of opinion among the members of the profession about certain points; but there could be no difference of opinion as to the fact that when the medical profession of the United States were met together in their representative assembly, the profession of the Empire State was excluded from the seat of honor to which it was entitled. It was the desire of the members of this Association that the medical profession of New York should no longer be placed in such a false position. They had not come together pledged to uphold the old Code any more than they had come pledged to uphold the laws and Constitution of the United States. The one was taken for granted as much as the other. This was a matter understood. Nor were they pledged to fight the other party in the profession, since they proposed to remain members of the County Medical Society, although that body had trampled under foot something which they held sacred. They had simply formed an Association which, together with similar societies throughout the State, could send delegates to Albany for the purpose of forming a State Medical Association, by means of which the profession of the great State of New York might once more become represented in the American Medical Association, whensoever and wheresoever that national body met. In conclusion, he would only say that it was intended that the papers presented to the Society, and the discussions participated in by its members, should be of the highest scientific value.

PROF. AUSTIN FLINT, SR., then read a paper on

THE PATHOLOGICAL AND PRACTICAL RELATIONS OF THE DOCTRINE OF THE BACILLUS TUBERCULOSIS.

(The paper appears in full on page 60 of THE NEWS.)

Dr. Flint was received with enthusiastic and prolonged applause, and before he commenced the reading of the paper he remarked that he considered it no small honor to be the first to present a scientific communication to this Society, and that he heartily congratulated it on the auspicious manner in which its career of usefulness had been inaugurated.

DR. WILLIAM H. WELCH in opening the discussion said that, personally, he was fully in accord with the views expressed in the paper. He had only one suggestion to make, and that was, that negative testimony in this case was of but little value as compared with positive. The fact that no bacilli could be found in any given case, especially if only one examination for their presence was made, did not prove that tuberculosis did not exist; while, on the other hand, if bacilli were found, it was proof positive of the existence of the disease. Repeated examinations, performed with great care, should be made when the early stages of tuberculosis were suspected, and great caution was to be observed in drawing conclusions from the apparent absence of the bacillus. The finding of the bacillus, he believed, established the diagnosis with absolute certainty.

DR. E. G. JANEWAY stated that he wished to corroborate what Dr. Welch had said. He was a firm believer in the existence of the bacillus and in the contagiousness of phthisis. Long before the brilliant discovery of Koch he had had his mind directed towards the infectiousness of the disease, and the latter had offered a practical solution of the matter which was entirely satisfactory to him. He had seen tuberculosis in certain families where there was nothing to explain its presence except the idea of contagion. Where there was no hereditary tendency or congenital taint whatever, he had known three or four members of a family to succumb to the disease. The lack of belief in the contagiousness of phthisis, he thought, led many physicians to neglect making proper inquiry as to whether patients had not been exposed to infection. He then proceeded to relate a case which he said he had already published, but which was of so striking a character that he would venture to repeat it. It was that of a young man suffering from pulmonary tuberculosis, who had lost three dogs in succession with all the symptoms of the disease; the animals having been in good health at the time that he purchased them. It was ascertained that he was in the habit of taking the dogs to bed with him (he owned but one at a time), and that they slept in such a position as to cause them continually to inhale his breath. Dr. Janeway remarked that he did not know of any case of the disease among dogs in which more plausible proof of its contagiousness was afforded. Physicians from different parts of the country had frequently mentioned cases to him which seemed to point strongly to a specific contagion. One, as he recalled, had told him that he had known of twenty-five members of the branches of a single family being attacked with tuberculosis.

Another point of importance was, that in members of a family in which it had appeared, who were themselves supposed to be free from it, the disease sometimes existed in a latent form and made very considerable progress before it was detected. Thus, in a family in which the mother and a sister and brother had died from phthisis, he was called to see a young woman who was suffering from hæmoptysis, and on making an examination of the chest of another sister, who had never complained of any trouble, he found a more marked tubercular condition than in the one who had had the hemorrhage. The French writers mentioned a case in which a man

was successively married to four wives, all of whom died of phthisis, the husband himself also finally dying of the disease. He fully agreed with what Dr. Welch had said in regard to negative evidence. In the early stages he had often found it very difficult to get sputa from patients at all. In the sputa of the same patients, after the disease had become more fully developed, he had in some instances found bacilli. One failure, as Dr. Welch had remarked, ought not to make us exclude phthisis. He would allude to only one other point. That day he had been at the post-mortem examination of a patient in whose lungs was found a considerable amount of cheesy degeneration. Three and a half years ago he had hemorrhage from the lungs, and the physician who attended him at that time found disease at the apex of the left lung; a fact which was afterwards entirely forgotten. In another case, where the patient died from gall-stone, the evidences of past tuberculosis were found, though it had been eighteen years since he had suffered from cough and expectoration.

DR. GEORGE PEABODY remarked that he also was fully in accord with all that had been said on the subject, and that he could only add that some corroborative evidence was afforded by the treatment devised by Kurchman, of Germany, several years ago, viz.: The use of antiseptic masks, through which the patient breathed in cases in which the disease was largely situated in the larynx. This plan he had himself tried in certain hospital patients, who had expressed themselves as greatly relieved thereby, and who had persevered in wearing the masks, notwithstanding the weather was then quite hot, on account of the relief afforded by them. In some instances the cough was markedly diminished, in some the expectoration, and in some the night-sweats, while in still others all three symptoms were benefited.

DR. NELSON related what he thought was a significant case, in the present state of the subject of tuberculosis. A gentleman who was troubled with cough and expectoration married a lady who was at the time in the most perfect health, but who not long afterwards was attacked with phthisis, and died, the husband having recovered.

Another member said that in 1868 he removed sixteen ounces of pus from the pleura of a young lady twenty-three years of age, and hermetically sealed the external wound. A few months afterward she died of tuberculosis. The remaining members of the family, which consisted of the father, mother, a sister, and two brothers, were at that time in good health; but in less than two years the entire family had been swept away by phthisis. Within a month after the death of the young lady mentioned, her sister became affected and soon died; and before a year had elapsed both the mother and father were dead. The elder brother was the next victim, and finally the younger brother succumbed. Before the death of the first daughter the family removed to a more salubrious location, immediately adjoining Central Park, and from the first they were surrounded by the best hygienic conditions. This striking history he had also reported to the Academy of Medicine.

DR. WILLIAM H. WELCH then presented

A SPECIMEN OF HYDATID TUMOR.

This was a large echinococcus cyst of the spleen, which he said was of considerable interest on account of its rarity. The patient in whom it was found was a German who died in Bellevue Hospital from superficial external burns. No previous history of disease could be obtained, and as the tumor was only accidentally discovered at the autopsy, the clinical aspect of the case was, of course, defective. No other pathological condition was discovered. The growth was attached to the hilus of the spleen, and was apparently in the gastro-splenic omentum. No external swelling seemed to be caused by it, and it was covered by the intestines; the transverse colon passing directly over the tumor. In the books it was often put down as a point in the diagnosis of enlargement of the spleen from any cause, that there would be complete flatness extending over a greater or less area, on account of the intestines being underneath the spleen. In this instance it was seen that just the opposite was the case, and during life there would undoubtedly have been tympanitic resonance over the seat of the tumor, from the fact of the transverse colon passing above it. There was a large fibrous capsule, almost entirely devoid of cells, and some calcareous deposits. On making an incision the capsule was found to contain about four ounces of clear fluid, and after it had escaped it was found that there was a large cyst in the centre which had collapsed. This was the mother-cyst, while surrounding it there were at least two hundred daughter-cysts. The method of development was, therefore, exogenous, which was much less common than the endogenous, in which the daughter-cells grow within the parent cell. These daughter-cysts are of all sizes, from that of a pea to that of a hen's egg. No heads of echinococci could be discovered, but some hooklets were found. The ova of the echinococcus were supposed to enter the human intestines through the agency of drinking water.

Dr. Welch then gave an elaborate demonstration on the blackboard of the development of echinococcus cysts in the human subject. After describing particularly the endogenous and the exogenous, he went on to speak of the third form, the multilocular cyst. This, he said, had never been met with in this country, and as it was found exclusively in Switzerland and Southern Germany, he thought it probable that it was not produced by the same embryo as the others. In the case which he presented, there seemed to be an attempt at spontaneous cure. The explanation of the special condition found was to be looked for in the presence of the very thick fibrous capsule, which had caused a marked narrowing of the bloodvessels passing to the growth, and the parasites were thus, to a great extent, deprived of their means of subsistence. As regards echinococcus cysts in general, they were not frequent in this country. Sixty-one cases had been collected by Osler, of Montreal, and a large number of these were in foreigners. Personally, he had seen four cases in the dead-house of Bellevue Hospital. All these were in foreigners; three of the patients being Germans, and one an Irishman.

It had been a question in his mind whether the affection ever occurred in native Americans; but, on the whole, he was inclined to the opinion that it did in certain rare instances. In this case, the spleen was flattened out to three times its natural length. The fluid which the cyst contained was clear, opalescent, and having only a trace of albumen in it. The negative character

of the fluid was the main point of diagnosis in these cysts during life; but it was always to be borne in mind that the fluid of parovarian tumors (cysts of the broad ligament) was almost exactly similar. It was difficult to make the diagnosis with certainty, therefore, unless hooklets were discovered, when, of course, there could be no longer any doubt about the matter.

At the conclusion of Dr. Welch's remarks, the Society went into executive session.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, December 14, 1883.

THE PRESIDENT, T. A. RODGER, M.D., IN THE CHAIR.

TERTIARY SYPHILIS: CEREBRAL, LARYNGEAL, AND RECTAL.

DR. GEORGE ROSS presented the specimens, accompanied by the following history: Woman, aged thirty-six, was brought to hospital November 20th, with left hemiplegia; eyes fixed, and deviating to the right; pupils contracted; eyeballs prominent; both upper eyelids drooped slightly; tongue protruded to left side. Roused with difficulty, and then answers questions rationally in a whispered voice. Paralysis not complete in left side; she could lift the leg a little, and offered slight resistance to flexion and extension of the arms. Complained of pain in the right occipital region. No fever. Patient had been under treatment for necrosis of palate, and syphilitic affection of eyes and larynx. Had severe headaches all summer. The present attack began four days before admission. On the evening of the 10th, she went to bed in usual health, but during the night she behaved strangely and did not seem well. The next day her husband noticed that there was something wrong with the left arm, as she did not use it freely. On Sunday, the 19th, there was hemiplegia. While in hospital, no change took place in the paralyzed parts. The right cornea became turbid, and an ulcer formed; there were the other evidences of involvement of the right fifth nerve. There was right external strabismus. Passed a good deal of pus and mucus from the bowel, and on digital examination a firm stricture was felt about one inch and a half from the anus. The breath was fetid, and towards the close there was considerable laryngeal stridor. There was great tenderness of the larynx externally. She gradually sank, and died on the 8th. The corneal ulcer healed, but the tissue remained opaque.

The brain presented extensive syphilitic disease at the base and in the right Sylvian fissure. The right temporo-sphenoidal lobe was firmly adherent in the middle fossa, and both dura and pia mater thickened and adherent. The fifth nerve, just as it entered the Gasserian ganglion, was involved in a mass of gummatous tissue, growing beneath, and attached to the margin of the tentorium. The nerve, for a quarter of an inch was swollen, and the fibres separated. The right optic nerve, close to the commissure, was surrounded by recent infiltration, and was inflamed and swollen to nearly double the size of the left nerve. The right sixth appeared involved, but the third was free. The right temporal and orbital convolutions were firmly united together by thickened and infiltrated tissue. The right middle cerebral was small, and a few lines from its origin passed directly into a gummous mass which surrounded it for nearly half an inch. The membranes in the fissure beyond this were free, and the arteries small and full of white and red thrombi. The vessel in the gumma was quite occluded. The anterior cerebral artery contained a tolerably firm clot. The other vessels and the rest of the base looked normal. There was red softening of the convolution and parts supplied by the middle cerebral, particularly of the island and the ascending convolutions. Both nuclei of the corpus striatum were softened. The right optic disk was slightly swollen, but the intense neuritis evident near the commissure did not extend the whole length of the nerve.

There was extensive destruction of hard and soft parts of the palate, and ulceration of upper part of pharynx, and in the nose. The larynx presented advanced syphilitic disease; ulceration of both cords—most of the left. The greater part of the thyroid cartilage was neurotic, broken into three or four segments, and surrounded with sloughing tissue. There was suppuration beneath the sterno-thyroid and thyro-hyoid muscles. The anterior part of cricoid cartilage was also necrosed. The rectum presented a large area of ulceration, and a short distance within the anus there was cicatricial tissue in the form of an annular ring.

DR. HENRY HOWARD remarked on the frequency of cerebral syphilis, and gave his experience of its connection with acute mania and other forms of insanity.

PREATAXIC TABES DORSALIS.

DR. JAMES STEWART presented a patient whose history and symptoms were as follows: James C., aged 33, clerk, complained only of dimness of vision. He first noticed it ten weeks ago, and three weeks after consulted Dr. Butler, who diagnosed the case as one of tabes. Twelve years ago he had double vision for a week. In the year 1879, he also recollects seeing double for three days. His general health has been excellent. Has never had syphilis. Three years ago he worked for several months in a very damp cellar. Family history is unimportant. *Present state:* There is permanent contraction of the right pupil (paralytic myosis). There is loss of reflex contraction of the pupils, while both contract on accommodation. There is also loss of reflex dilatation of the pupils; when the skin is ever so severely irritated by the faradic brush, there is no response. There is well-marked atrophy of both disks. The patellar reflex is absent in both legs, and this with the eye phenomena are the only symptoms of tabes present. No lightning pains, no bladder or rectum pareses, no ataxia, no delayed, lost, or perverted sensations. The skin reflexes are present. Notwithstanding the absence of so many prominent symptoms, there can be no doubt that the case is one of tabes dorsalis in the preataxic stage. The case is a good illustration of the now generally conceded opinion that the disease is essentially one of the sensory tracts. Three of the prominent symptoms are failure of normal reflexes. 1. Reflx contraction of the pupils. 2. Loss of the reflex dilatation. 3. Loss of the patellar reflex. The patient has been treated during the past seven weeks with the faradic brush, three times weekly, after the manner recommended so highly by Rumpf of Borne.

DR. R. PALMER HOWARD spoke of the importance of these early eye symptoms in tabes, particularly myosis and irregularity of the pupils, and narrated several cases in illustration. Myosis, in his experience, was associated chiefly with two affections, tabes and progressive paresis. The great rapidity of the pulse in some instances had attracted his attention. In three cases under observation, it was always about 100, and he had met with one with a pulse of 140. With regard to the use of the faradic brush, he had a patient at present under this treatment in whom the anæsthesia had been greatly relieved by its use.

DR. HENRY HOWARD spoke of impotence as an early symptom of locomotor ataxia, and asked if this patient still retained his sexual vigor.

DR. OSLER asked if the double vision twelve years ago could be attributed to the same cause as the eye symptoms now present. In cases associated with syphilis the early ocular troubles may be sometimes due to it, as in a patient of his, who had double vision and other symptoms of cerebral syphilis years before the tabes developed.

DR. BULLER remarked that this patient consulted him on account of failing vision, and he found his sight much impaired, R. E. V. = $\frac{20}{C}$; L. E. = $\frac{20}{LXX}$; with great concentric limitation of the visual field. The field for colors was contracted in a similar manner, but there was no central scotoma. The optic nerves presented the usual appearance of progressive atrophy of spinal sclerosis. The condition of the eyes, together with the absence of patellar reflex, seemed to warrant the diagnosis of locomotor ataxia. With regard to the atrophy of the nerves in this disease, Dr. Gowers has made the observation that when this condition comes on early in the course, in the first or preataxic stage, the resulting loss of vision is more rapid, and more complete, than when occurring as a later symptom. This coincided with his experience. When atrophy of the nerves occurred early, it was often, he thought, a matter of doubt whether the trouble was of spinal origin. He knew of several cases in which optic atrophy had led to complete blindness, now lasting for one, two, or three years, without the development of fresh spinal symptoms, although there had been all along absence of the patellar reflex. All of these cases had been regarded as commencing locomotor ataxia by the very highest authorities, both in Europe and America.

DR. STEWART, in reply, said that, so far as the patient knew, he was not impotent.

TAIT'S OPERATION.

DR. ARMSTRONG exhibited a pair of diseased ovaries which he had removed from a single woman, aged 22, who had suffered for three years with pelvic pain, and, for the past year, menstruation every fortnight, not profuse, but accompanied by severe pain. The loss of appetite and vomiting at each period had so reduced her strength that she was quite unfit for work. The ovaries were felt to be enlarged and prolapsed. She was not hysterical. The ovaries were enlarged to the size of walnuts, thickened and fibroid; no adhesions. The patient had done well since the operation, which it was hoped would permanently relieve her.

FIBRO-GLIOMA OF UPPER END OF ASCENDING FRONTAL GYRUS; JACKSONIAN EPILEPSY OF FOURTEEN YEARS' STANDING; THE LEG-CENTRE.

DR. OSLER read a report of the case, and presented specimens and drawings in illustration. The case occurred in the family of a medical man, and was remarkable from the length of time during which the convulsions had lasted, and the limitation of the lesions. After preliminary remarks on cortical epilepsy and the value of pathological cases in localizing the functions of the brain, the notes furnished by the Doctor were read, of which the following is an abstract: "Mary ——, aged fifteen years and nine months. When sixteen months old fell on her head from the table and appeared to be much hurt, but recovered without any serious effects. Five months after, the left hand was noticed at times to be stiff and firmly closed. This continued to increase in severity and frequency for three months, when the leg became similarly affected, and two months later she was confined to bed, as the paroxysms had become general. For eight or ten weeks the seizure continued in this violent way; sometimes she had eight or ten in an hour. No loss of consciousness; then, after lasting for about seven months, they ceased, and she ran about apparently quite well.

She remained free from spasms for a year, when they returned and ran much the same course for six or seven months, and she then again recovered for about the same length of time. This went on until her eleventh year; months in which the spasms were severe and months in which she was quite free. One of the attacks is described by the Doctor as follows: "suppose her at the dinner table. She would suddenly say, 'Oh! I am going to have a spasm' (she knew this by the contraction of the left hand), she would then jump up and go to the sofa, get a cushion, lay it down on the floor, then lie down with her head on the pillow, and then jerk away in a spasm for half a minute or a minute; laughing or talking all through it, and never losing consciousness. She would then get up, replace the cushion, and come back to the table and finish her dinner." About six years after the illness began, the left leg began to show signs of weakness, and gradually the foot turned in. During her eleventh, twelfth, thirteenth, and fourteenth years, the seizures were very bad, and she had no prolonged intervals. For six weeks, at one time, she lay unconscious, and had from fifty to eighty spasms in the twenty-four hours. As the attacks became less frequent she was able to sit up in bed or in an easy chair, and read or do fancy work. Last Christmas, when she was fifteen years of age, the spasms suddenly ceased, and she was ten months without one. A week before her death they returned with great violence, and increasing frequency until they became almost continuous, and for two days there was coma. Three hours before death they ceased, and she passed away quietly. The left arm and hand were weak, not wasted; the left foot was flexed inwards at right angles, and firmly fixed in that position. In reply to questions, the Doctor gave some additional particulars. The spasms always began in the left hand, and appeared to extend to the leg first, and then to the face. The intellect was clear, and she was, though without special instruction, beyond her years in intelligence and general information. The clinical history may be briefly given as follows: Cortical epilepsy

for fourteen years; remarkable intermissions of from six to twelve months. Spasms began in the left hand, at first monobrachial, then extended to the leg, afterwards became unilateral, and finally general. No loss of consciousness for some years. Weakness of left arm, permanent contracture of right leg and foot. Intellect unaffected.

The brain was large and well formed, dura mater natural, no adhesions or spots of thickening on the pia mater, vessels much congested, hemispheres symmetrical, no wasting of convolutions or puckering. In slicing the organ *pre-frontal* and *pediculo-frontal* sections normal. A section three centimetres in front of the fissure of Rolando showed nothing abnormal. In making the *frontal* section, the knife passed through a hard resistant mass in the right hemisphere, occupying the upper end of the ascending frontal convolution. The knife passed exactly two centimetres in front of the fissure of Rolando and the mass occupied the superior fasciculas of the white fibres, nowhere reaching the surface and scarcely touching the gray matter. In this exposure it measured fourteen millimetres in width by sixteen in vertical extent, and was eight millimetres from the surface of the paracentral lobule, ten millimetres from the top of the gyrus close to the longitudinal fissure, and fifteen millimetres from the external surface of the convolution. In a section seven or eight millimetres behind the *frontal* the mass was visible as a small round puckered portion just at the edge of the gray matter, at the bottom of a small sulcus passing into the ascending frontal gyrus from the fissure of Rolando. The mass occupied the upper end of the convolution, and had an antero-posterior extent of about seventeen millimetres, and a vertical of fifteen or sixteen millimetres. It was almost entirely within the white matter, but touched upon the gray at several spots. It had a fibrous appearance with ill-defined borders; and vessels could be seen in it. The *parietal* and other sections were normal. The right crus was badly torn, and no sclerosis could be seen, but the right half of the medulla was smaller than the left and presented evidence of descending degeneration. The cord was not examined.

Histologically the mass appears to be a fibro-glioma. The delicate fibre elements are in excess, but there are many large cells with prolonged fibrillar process. The bloodvessels are numerous. So far as examined, the cells of the gray matter in the immediate vicinity did not appear to be much altered.

Dr. Osler remarked that lesions causing cortical epilepsy were rare in the white matter, but this one was close enough to the gray cortex to induce the irritative effects and the excessive motor discharges causing the convulsions. Gliomata were slow-growing local tumors, and instances were on record of nearly as long duration as in the case under consideration. Dr. Jackson had described one of ten and another of twelve years' standing. The remarkable intermissions were strange features in these cases; periods of quiescence alternating with periods of excessive irritation. The situation of these lesions was of interest in connection with the crural monoplegia and contraction. The tumor occupied largely the anterior portion of the paracentral lobule, the region which has been found affected in the few recorded instances of paralysis of one lower extremity of cerebral origin. The leg-centre is placed in this lobule by Ferrier and Charcot, and this case is in confirmation, as we may reasonably conclude that the lesion, by interfering with conduction from this centre, induced the paralysis and subsequent contracture.

DR. HENRY HOWARD made some remarks on the cases of epileptiform convulsions which he had seen.

DR. HAMMETT HILL, of Ottawa, narrated the case of a lumberman, who was struck on the head with a pike, and received a depressed fracture. He had severe seizures, and was trephined with success, and he had no fits for eighteen years, after which they recurred at long intervals, possibly due to bony thickening about the seat of trephining.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, December 19, 1883.

THE PRESIDENT, WM. M. WELCH, M.D., IN THE CHAIR.

DR. ROBERTS BARTHOLOW read the following paper on

NITROGLYCERINE AND THE CHLORIDE OF GOLD AND SODIUM IN THE TREATMENT OF ALBUMINURIA.

Hitherto the therapeutics of renal diseases have not advanced in the same ratio as our knowledge of their pathology. It cannot be said now that a cure has been found, but that two remedies of real value are available. I shall attempt to define the place which these remedies should occupy in a curative scheme. To do this, in even the briefest way, I must clear the ground with a preliminary statement.

I start with the proposition that those renal lesions united by the common symptom—albuminuria—are of neural origin. There is a kinship between diabetes and Bright's disease. One of these is sometimes substituted for the other; and during the course of some rare cases of exophthalmic goitre this substitution occurs. Irritation of a certain part of the floor of the fourth ventricle is followed by glycosuria; of another part by albuminuria. The recent observations of Da Costa and Longstreth prove that a relation exists, whether causal or sequential, between certain renal lesions and degenerative changes in some ganglia of the abdominal sympathetic. The hypertrophy of the muscular coat of the arterioles, discovered by Dr. George Johnson, and the increased tension of the vascular system due to an irritation of the vaso-motor centre in the medulla, both present in the chronic forms of albuminuria, are further evidences of the agency of the nervous system. It was, more especially, the condition of elevated tension of the vessels which led to the use of nitroglycerine. This remedy before all else reduces the vascular tension. It also lessens the work of the heart by removing the inhibition exercised by the pneumogastric nerve.

This remedy appears to have been first used by Mr. Robson, an English surgeon, in cases of albuminuria, and by him employed, because the high tension of the vascular system has proved to be so pronounced an element in the more chronic cases. I have, myself, seen some remarkable instances of relief—indeed of cure—effected by it. In cases of mitral disease accompanied by albuminuria, it also renders the highest service—for the diminished peripheral tension lessens the work to be done by the heart, and assists in the more equal distri-

bution of the blood. The effect of this in relieving the renal congestion is obvious.

Chloride of gold and sodium has quite another function. It has long been known that this remedy has a special direction to the genito-urinary apparatus. The ovarian and uterine organs in the female, the testes and vesiculæ seminales in the male, are stimulated by it, and the kidneys, by means of which it is eliminated, and in which it tends to accumulate, are decidedly affected by it in function and structure. In common with some other agents of the class to which gold belongs—for example, corrosive sublimate—the chloride acts on connective tissue, and checks its over-production, or its hyperplasia. It would be quite impossible in this note to go over the evidence on these points, and hence I must ask assent to these statements. They have been accepted as true of gold, from the days of the alchemists and iatrochemists, as any one may ascertain from that curious collection of mediæval medical learning—the Anatomy of Melancholy. It has happened, strangely enough, that Hahnemann and his followers have profited by this knowledge, and have used gold preparations, especially *aurum potabile*, in the treatment of renal diseases with success.

How and when are these remedies to be used?

Nitroglycerine is now administered, as all present know, in the form of the centesimal solution—1 minim of the pure drug to 100 minims of alcohol. The initial dose of this one per cent. solution is one minim, which should be increased until the very characteristic physiological effects are produced. The susceptibility to the action of nitroglycerine varies greatly, and hence the dose cannot be stated in advance. It is necessary to produce some obvious effect. To maintain the same level of action, a slight increase in the dose may be required from time to time. As the effect is not lasting, the interval between the doses should no exceed three or four hours.

The administration of nitroglycerine should begin in acute cases immediately after the subsidence of the acute symptoms. It is indicated in chronic cases at all periods, but is more especially useful if given before hypertrophy of the muscular layer of the arterioles has taken place. When it acts favorably, the amount of albumen in the urine steadily diminishes. The mechanism of its action consists in the lowering of the pressure in the renal vessels. How far any curative effect proceeds from action of this remedy on the sympathetic system remains to be determined.

Cloride of gold and sodium is indicated in the subacute and chronic cases, especially the latter. The earlier it is given, the better, if structural changes are to be prevented or arrested. The good effects to be expected from it will depend necessarily on the extent of the damage already inflicted on the kidneys.

The usual dose is $\frac{1}{20}$ grain twice a day, but this may be much increased, if necessary. At the outset, $\frac{1}{10}$ grain may be given; in a week, the dose should be lowered to $\frac{1}{15}$ grain, and after a month the regular dose of $\frac{1}{20}$ grain should be steadily pursued, with occasional intermissions. Indigestion, gastralgia and colic pains, nausea, or diarrhœa are occasionally caused by it; and, if so, the quantity administered must be reduced. It is usually borne without any discomfort, but after prolonged administration, salivation, weakness, emaciation, trembling, and other nervous phenomena may occur possibly. Such effects, however, are wanting in my experience.

The treatment of albuminuria by nitroglycerine and the chloride of gold and sodium does not necessitate the exclusion of other means—hygienic, climatic, or dietetic. These remedies should, however, be given uncombined, at different hours, and their actions should not be hindered or obscured by the effects of other agents given with like purpose. To this general statement there may be two exceptions: with nitroglycerine, amyl nitrite or sodium nitrite may be given; with the gold and sodium chloride, corrosive sublimate may be combined. If doubts may be felt in regard to the propriety of depending on the utility of these remedies, they need not be long experienced, for if no good effects are observed in two weeks, they may then be discontinued.

DR. CHARLES H. BURNETT then read a paper on

THE SUPPOSED CONNECTION BETWEEN EAR DISEASE AND KIDNEY DISEASE.

Early writers on disease, he said, have shown a knowledge of the fact that alterations in hearing occur in the course of general diseases, as, for example, in diseases of the kidneys. It was supposed by them that the alteration in the functions of the ear, in this form of disease, was due to changes in the auditory nerve. But the results of the more reliable modern investigations tend to show that if an ear disease be due to kidney disease, the lesion usually occurs in the tympanic cavity, and not in the auditory nerve.

Certainly accidents of a hemorrhagic or apoplectiform nature might be expected either in the tympanic cavity or internal ear, in Bright's disease, when we reflect upon the deterioration of the blood and upon the malnutrition and friability of the vascular system, in the later stages of the malady. Further, as Bright's disease is characterized by a tendency to inflammation, especially in serous membranes, and as the membranous structures of the internal ear, or labyrinth, belong to this class of membranes, very naturally organic changes in these tissues might be looked for in Bright's disease of the kidneys.

However, as late as 1856, Rau, in his *Ohrenheilkunde*, published in Berlin in that year, claimed that there was not a solitary reliable observation at that time on record in favor of any symptomatic relation between the ear and the urinary organs. In 1869, Schwartze[1] reported a case of extravasation of blood into the tympanum, as peculiar to Bright's disease, though of rare occurrence; and in the same year, Dr. G. M. Smith, of New York,[2] called attention to the fact that impairment of hearing was at times one of the symptoms of Bright's disease, and a symptom which could not be explained by referring it to uræmia. In 1873, Dr. Roosa, of New York, in his treatise on the ear, referred to an obstinate case of suppuration and pain in the middle ear in a man sixty-one years old, suffering from Bright's disease. In this case, it was supposed that the effect of the renal disease upon the tympanic vessels was the cause of the acute suppuration, and it was also supposed that the disease in the

[1] Archiv f. Ohrenheilkunde, Bd. iv. S. 12.

[2] N. Y. Acad. of Med. See Roosa's Treatise, 1873, p. 257.

drum-cavity was originally hemorrhagic in nature. The subject was deemed of enough importance to place a physician on his guard for renal disease in cases of hemorrhage into the tympanic cavity. It must not be forgotten, however, that there is a purely sthenic form—otitis media hemorrhagica, occurring in subjects entirely free from kidney disease, in which the only effusion is pure blood, the removal of which from the tympanum by paracentesis is followed by cessation of pain and return of hearing.[1]

Again, in 1878, Schwartze[2] states that serous catarrh of the tympanic cavity is found in syphilis, heart disease, pneumonia, Bright's disease, naso-pharyngeal catarrh, and apparently may be due sometimes to vaso-motor disturbances. The same author says, hemorrhages into the labyrinthine cavity and the membranous labyrinth occur in kidney diseases. Also, that extravasations of blood into the tympanum occur spontaneously with acute inflammations in morbus Brightii, cynanche diphtheritica, and in endocarditis verrucosa recens et ulcerosa.

Dr. Paul Pissot,[3] in an inaugural thesis, is disposed to consider three forms of aural disease, which may arise in Bright's disease, viz., tinnitus aurium, partial deafness, and complete deafness. His conclusions are, that affections of the hearing may arise at the beginning or during the course of the renal disease. Intermittence seems to be characteristic of these forms of deafness, which may be contemporaneous with the œdema, or may precede it. They appear with all forms of the disease, and are manifested with variable intensity. But he cannot say to what special lesion of the ear, or of the nerve of hearing, their symptoms are attributable. Delacharrière, a responsible aurist, examined the cases upon the history of which the thesis is based, and found rupture of the membrana tympani, abnormal vascularity of the manubrium, and sclerosis of the tympanum, and was disposed to regard the conditions as causative forces. Pissot held that the hypothesis of Rosenstein, according to which there is œdema in the course of the auditory nerve within the cranium, may explain the intermittence and variations of intensity in these morbid manifestations. This latter process may be analogous to the œdema of the glottis and vocal cords noted in Bright's disease by Fauvel, in 1864. A similar symptom has been noted by Sée.

In alluding to chronic, non-suppurative aural catarrh in children, Von Troeltsch[4] says: "A greater blood pressure from increased action of the heart, as in Bright's disease, must necessarily produce a certain hyperæmia, even in the mucous membranes of the head." Albert H. Buck,[5] of New York, expresses the opinion that in some instances a serous fluid, deeply tinged with the coloring matter of the blood, finds its way into the tympanic cavity through other than inflammatory causes.

[1] Roosa, Transactions of American Otol. Society, 1882, and O. D. Pomeroy, Ibid., 1875.

[2] Pathological Anatomy of the Ear. J. O. Green's Translation, pp. 97 and 157.

[3] Thèse pour le Doctorat en Médicine. Faculté de Méd. de Paris, April 4, 1878.

[4] Diseases of the Ear, in Children. J. O. Green's Translation, 1882, p. 67.

[5] Diagnosis and Treatment of Diseases of the Ear, N. Y., 1880, p. 164.

"Instances of the latter form of disease are very rarely met with, and then usually in connection with a depraved state of the general nutrition, as in morbus Brightii."

Dr. Maurice Raynaud[1] expresses the opinion that diabetic otitis is not only more frequent than is supposed, but that when this has once become a well-known fact, it may prove a pathognomonic index, like anthrax, diffuse phlegmon, and certain erythematous eruptions about the genitals, and arouse suspicion of the presence of the renal disease hitherto unsuspected. He cites a case of well-marked diabetes mellitus, in which there suddenly occurred one evening, a severe earache, after the patient had been in the hospital two weeks, and most carefully watched, so that no chilling could have been the cause of the ear pain. The pain became intense, and towards midnight of the same evening in which the pain set in, there occurred an abundant hemorrhage from the drum-cavity of the affected ear, which was followed by immediate relief. This was followed for several days by a copious sero-sanguinolent, and then serous discharge, which contained leucocytes, and albumen, as shown by heat, but no sugar. Post-mortem examination, twenty-three days after the attack of otitis, revealed a large perforation in the anterior segment of the membrana tympani; red, fungous, and bleeding mucous membrane in the drum-cavity, in which there was a pink, purulent liquid. The ossicles were not dislocated, but were imbedded in granulations, and near the stirrup was a clot of blood. The mastoid cavity was filled with a rose-colored liquid, containing pus-cells, and its bone substance was greatly injected and marbled, presenting all the appearances of inflammation of bone tissue. The labyrinth showed no alterations. The author concludes that osteitis in the petrous bone is a peculiar and constant symptom of diabetic otitis.

P. McBride,[2] in an article devoted to the consideration of the various causes leading to aural disease, states that "occasionally the ear is affected in Bright's disease by hemorrhage into the tympanic cavity. The tympanum becomes filled with blood, which probably either becomes absorbed or leads to suppuration. Schwartze was perhaps the first to observe this condition." McBride further says: "I am not aware that sudden labyrinthine deafness in the course of Bright's disease has been described, but it seems probable that such a contingency might be looked for here and also in pernicious anæmia, in which retinitis hemorrhagica is not uncommon." In the recently published work of Prof. Politzer,[3] on the ear, the author's experience is that in cases in which a supposed connection existed between the organic renal disease and an aural malady, the fundamental cause lay in very apparent changes in the middle ear. He has also found that "catarrhs of the ear run an unfavorable course in tuberculosis, Bright's disease, and all cachexiæ by which the nutrition of the general system has become deteriorated."

Dr. Burnett then offered the following

CONCLUSIONS.

1. Evidences in favor of either frequent or well-marked aural lesions, dependent upon renal diseases, are extremely meagre.

[1] Clinical lecture at La Charité, Paris. Annales des Maladies de l'Oreille, etc., March, 1881.

[2] Edin. Med. Journal, February and March, 1882.

[3] Cassell's English Translation, 1883, Phila.

2. Those lesions in the ear, which have been found in connection with Bright's disease and diabetes mellitus, and which may have been dependent upon the dyscrasia induced by these renal disorders, are in the form of sero-sanguinolent and hemorrhagic effusions into the drum-cavity. But the latter must not be mistaken for the sthenic form of otitis media hemorrhagica.

3. From the serous nature of the membranous structures of the labyrinth, organic changes might reasonably be expected in Bright's disease, but positive proof of the occurrence of such lesions based on ante- and post-mortem history is wanting.

NEWS ITEMS.

MEDICAL MATTERS IN CONGRESS.—The following bills, of medical interest, have been introduced in Congress during the past week:

H. R. 2697, introduced by Mr. Randall, of Pennsylvania, to prepare and publish a National Pharmacopœia for the United States, which was read a first and second time, referred to the Committee on Ways and Means, and ordered to be printed.

H. R. 2785, introduced by Mr. Young, of Tennessee, to amend an Act entitled "An Act to prevent the introduction of infectious and contagious diseases into the United States, and to establish a National Board of Health," which was read a first and second time, referred to the Committee on the Public Health, and ordered to be printed.

S. 982, introduced by Senator Miller, of New York, for the maintenance and support of the Marine-Hospital Service. Read twice by title, referred to the Committee on Commerce, and ordered to be printed.

THE YELLOW FEVER OF 1883 AT PENSACOLA.—The total number of cases of yellow fever, and mortality, at Pensacola Navy Yard and adjacent villages, in 1883, is given as follows: Pensacola Navy Yard, cases, fifteen; deaths, six. Woolsey and Warrenton, cases, one hundred and fifty-two; deaths, twenty-seven. Total, one hundred and sixty-seven cases; thirty-three deaths.

HEALTH OF HAVANA.—Sanitary Inspector Burgess, U. S. Marine-Hospital Service, reports that there were five hundred and seventy-eight deaths from all causes at Havana, Cuba, during the month of December, 1883; of which fifty-three were from yellow fever, eleven from typhoid fever, thirteen from malarial fever, four from diphtheria, four from croup, and one from glanders. Forty-three of the deaths from yellow fever were among citizens and the merchant marine, and the remaining ten among the army and navy. During the week ending January 4, 1884, there were seven fatal cases of yellow fever. During the month of December, 1882, there were five hundred and thirty-five deaths, only twenty-four of them being from yellow fever; and during the week ending January 4, 1883, but four from that disease.

CONSULAR REPORTS CONCERNING YELLOW FEVER.—Yellow fever appeared on board the mail steamer "Lima" bound from Panama to Callao. The U. S. Consul, under date of December 12, 1883, reports that the disease appeared when two days out, and three persons died from the disease. The steamer was placed in strict quarantine, and no fresh cases were reported. The U. S. Consul says: "Every possible precaution is being observed on shore to avert contagion, but from the circumstance of the advent of our heated term, much anxiety is manifested."

The U. S. Consul at Buenos Ayres states that two cases of yellow fever were landed at that place from a French steamer which touched at Rio Janeiro, and that the apprehensions caused thereby induced the authorities at Montevideo to place a ten days quarantine on all vessels proceeding from Buenos Ayres. There is a quarantine of three days observed by Buenos Ayres of all vessels from Brazilian ports.

INTERNATIONAL MEDICAL CONGRESS.—The Secretary of State is in receipt of a communication from the Danish Minister, in Washington, D. C., relative to the Eighth Annual Session of the International Medical Congress, which is to be held in Copenhagen in August next. The following is a copy of the letter:

"I am officially informed by my government that the Eighth International Congress for Medical Science, will meet at Copenhagen in the days from the 10th to the 16th of August, 1884.

"The different States having generally been represented, at the preceding meetings of this Congress, by different official delegates, His Danish Majesty's Government entertains the hope that this may also be the case at the impending Congress. Conforming to the wish expressed by the Board of Organization, I am instructed to assure the Government of the United States that the Danish Government would highly appreciate the fact of its being officially represented at the Congress, and to invite you to inform me, in good time, of the names of the delegates to whom may be intrusted this distinguished mission. I have the honor to inclose five copies of the letter of invitation issued by the Committee of Organization, to which will be added later the definitive programme of the labors of the Congress.

"Reminding you that the Eighth International Congress (according to the notice already published some months ago in the medical journals) will be held in Copenhagen from the 10th to the 16th of August, 1884, we have the honor of communicating to you that the General Organizing Committee, formed for the preparatory work, is composed of the following members, living either in or near Copenhagen:

"President, Professor Dr. P. L. Panum. Secretary General, Professor C. Lange. Secretaries, Dr. O. Bloch, Dr. C. J. Salomonsen, and Surgeon-General Joh. Maller. Honorary Treasurer, Professor Dr. E. Hansen Grut. Also the Presidents of the Special Committees of the Section of Anatomy, Professor Chievitz; of the Section of Physiology, Professor Dr. P. L. Panum; of the Section of General Pathology and Pathological Anatomy, Professor Dr. C. Reisz; of the Section of Medicine, Professor Dr. F. Trier; of the Section of Surgery, Professor Dr. Holmer; of the Section of Hygiene and State Medicine, Dr. E. Hornemann; of the Section of Military Surgery and Medicine, Director-General of the Medical Department of the Army, Salomon; of the Section of Mental and Nervous Diseases, Professor Dr. Steenberg; of the Section of Obstetric Medicine and Surgery Gynecology, Professor Dr. Stadfeldt and Professor Dr. Horvitz; of

the Section of Diseases of Children, Professor Dr. Hirschsprung; of the Section of Ophthalmology, Professor Dr. E. Hansen Grut; of the Section of Diseases of the Skin and Syphilis, Professor Dr. Haslund; of the Section of Diseases of the Ear, Dr. W. Meyer; of the Section of Diseases of the Throat, Dr. W. Meyer.

"The Special Committees formed for the aforesaid Sections have, when they found it useful, completed their number by members living outside Copenhagen, partly in Denmark, partly in the other Scandinavian countries.

"In order that the meeting of so many distinguished medical men, whom we hope to see on this occasion, may be as advantageous as possible, the Organizing Committee, following the example of the later Congresses, will communicate with distinguished men of different branches and of different countries, in order to prepare a programme. This programme, as well as the rules, will be forwarded to those of our colleagues whom we suppose take an interest in the work of the Congress, and who might be inclined to participate in it."

INTERNATIONAL CONGRESS OF HYGIENE.—A note from the Minister of the Netherlands in Washington, received by the Secretary of State, gives the information that the International Congress of Hygiene will hold its next session at the Hague, beginning August 21, 1884, and that "Governments, States, Corporations, etc., are invited to send delegates."

NEW YORK STATE MEDICAL SOCIETY.—The Seventy-eighth Annual Meeting of the New York State Medical Society will be held on Tuesday, February 5th, under the presidency of Alexander Hutchings, M.D. The following papers are announced to be read:

Malignant Lymph-Adenoma, with Cases, by Dr. L. S. Pilcher, Brooklyn. Dysmenorrhœa; its Treatment by Dilatation, by Dr. W. W. Potter, Buffalo. Operation for Closure of the Hard and Soft Palate, with Results, by Dr. A. Vanderveer, Albany. Value of Electricity in Diagnosis, by Dr. L. E. Felton, Potsdam. The Treatment of Suppurative Otitis in Children, by Dr. S. Sexton, New York City. A Case of Sympathetic Serous Iritis, with Remarks, by Dr. D. Webster, New York City. Strangulated Hernia, with Reports of Five Cases Treated by Operation, by Dr. J. Chapman, Medina. Two Unusual Cases in Obstetrical Practice, by Dr. W. C. Wey, Elmira. A New Method of Partial Extirpation of the Cancerous Uterus, by Dr. E. Van de Warker, Syracuse. Two Cases of Poisoning by Tansy, by Dr. W. Woodward, Big Flats. Hæmaturia; Two Cases of Extra-Uterine Pregnancy; and Two Cases of Rupture of the Heart, by Dr. T. H. Squire, Elmira. Management of Face Presentation, by Dr. E. L. Partridge, New York City. Morbid Somnolence, by Dr. C. L. Dana, New York City. An Operation for Correcting Deformity of the Auricle, by Dr. O. D. Pomeroy, New York City. Rheumatic Joint Lesions of Children, by Dr. V. P. Gibney, New York City. Biographical Sketch of the Late Dr. G. W. Bradford, by Dr. C. Green, Homer. Orbital Cellulitis, by Dr. T. R. Pooley, New York City. Biographical Sketch of the late Dr. J. F. Jenkins, by Dr. G. J. Fisher, Sing Sing. Poisoning by Potassium Chlorate, by G. B. Fowler, New York City. Spontaneous Pyæmia, by Dr. J. B. Todd, Parish. The Establishment of Hospitals in Small Cities, by Dr. E. H. Parker, Poughkeepsie. House Sanitation; as it is and as it should be, by Dr. W. F. Sheehan, Rochester. Croup as distinguished from Diphtheria, by Dr. A. G. Crittendon, Clifton Springs. The Medical Society of the State of New York in its Relation to Sanitary Science and the Public Health, by Dr. E. Harris, Albany. A Plea for the Pharmacopœia, by Dr. L. Johnson, New York City. Canalization, as Applied to Amputation of the Female Breast, to insure Primary Union under one Dressing, by Dr. A. G. Gerster, New York City.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.—The annual meeting of this Society will be held at Philadelphia on May 14, 15, and 16, 1884, in the Assembly Room of the Union League, Broad and Walnut Streets. The President's reception and the entertainment by the Philadelphia County Medical Society will be held on the evening of May 14, at the Pennsylvania Academy of the Fine Arts, Broad and Arch Streets.

Notice is given that all those who wish to present papers should send the full title and a short abstract of the same to the Committee on Arrangements, John B. Roberts, Chairman, 1118 Arch Street, Philadelphia, on or before March 1, 1884.

THE MISSOURI STATE BOARD OF HEALTH, at a meeting on January 9th, unanimously adopted resolutions concerning the recognition of the diplomas of certain medical colleges.

Resolved, That it is expedient to recognize the Joplin College of Physicians and Surgeons; that it does not recognize the St. Louis Eclectic College; and that it does not recognize as in good standing the Kansas City Hospital College of Medicine, and the American Eclectic College of Cincinnati.

Six applicants presented themselves to the Board for personal examination as physicians, of whom three were accepted and three rejected. In a number of cases of applications for certificates, information had been presented to the Board charging the applicants with an unprofessional mode of practice. A number were rejected on this ground. In others, where the evidence was not conclusive, certificates were ordered issued. It is stated that some of the Colleges not recognized by the Board intend to test the matter in the courts.

THE NEW YORK OPHTHALMOLOGICAL SOCIETY.—At the Nineteenth Annual Meeting of the New York Ophthalmological Society, held last Monday evening, the following officers were elected for the ensuing year:

President.—David Webster, M.D.

Vice-President.—C. J. Kipp, M.D., of Newark, N. J.

Secretary and Treasurer.—James L. Minor, M.D.

THE NEW YORK POST-GRADUATE MEDICAL SCHOOL is preparing to increase further its field of usefulness in the way of medical teaching by making an effort towards combining the school with a hospital of its own. On or about February 1, 1884, it will enter its new quarters in East Twentieth Street, between Second and Third Avenues, where the accommodations will be most ample for its school and for sixty to one hundred patients. One hundred and forty practitioners of medicine matriculated at the school during the year that ended

November 1, 1883. Over sixteen thousand patients were rendered available for the purposes of clinical instruction.

THE PHILADELPHIA POLYCLINIC.—The Annual Report of the Philadelphia Polyclinic states that 3301 new patients have been treated in the dispensary between the time of its opening in March and the close of the year 1883; and that this material has been utilized in the clinical instruction in the various specialties of seventy-two pupil physicians.

THE ARCHIVES OF MEDICINE.—G. P. Putnam's Sons take much pleasure in announcing to the subscribers to *The Archives of Medicine* and the profession generally, that DR. E. C. SEGUIN, having resumed his professional work in New York, has been induced to retain the editorial management of the *Archives*. The publication of the *Archives* will, therefore, instead of being brought to a close, as was first announced, be duly continued on the same general plan as that followed during the past six years.

MONUMENT TO DR. SIMS.—Dr. S. D. Gross urges that a monument be erected in the city of New York to the late Dr. J. Marion Sims, and offers to contribute $100 as soon as a committee shall be formed for the purpose of collecting subscriptions.

LEGACY TO THE FRENCH ASSOCIATION.—M. GIRARD has recently left about one hundred thousand francs to the Association Française pour l'Avancement des Sciences. The interest on this sum will be allowed to accumulate for five years, after which it is to be used for the encouragement of persons making contributions to the question of the antiquity of man. The rewards will be given under the forms which the Association may deem proper.

EGYPTIAN OPHTHALMIA IN HUNGARY.—A very severe epidemic of Egyptian ophthalmia has recently broken out in Hungary. Some villages have as many as six hundred affected at one time, and, in spite of every effort by the government and the physicians, the disease seems to be on the increase.

STATISTICS OF FRENCH MEDICAL PRACTITIONERS.—*Le Progrès Médicale* of December 1st furnishes the following analysis of the quinquennial report which the Minister of Commerce has just published:

	1876	1881
Doctors of Medicine,	10,743	11,643
Officiers de Santé,	3,633	3,203
Pharmaciens,	6,232	6,443
Herbalists,	983	982
Midwives,	12,847	13,403

The number of communes in France is 36,097; in these 3645 doctors alone practise; in 1914, Officiers de Santé alone practise; in 743 both Doctors and Officiers de Santé practise, while in 29,795 there are neither doctors nor officers.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending January 5, 1884, indicate that neuralgia and dysentery have increased, and that inflammation of the kidney, tonsillitis, intermittent fever, and typho-malarial fever have decreased in area of prevalence.

Compared with the average for the month of December in the preceding six years, diphtheria, remittent fever, pneumonia, consumption, and typho-malarial fever were less prevalent in December, 1883.

Including reports by regular observers and others, diphtheria was reported present during the week ending January 5, and since, at fourteen places, scarlet fever at nine places, measles at two places, and smallpox in Orleans Township.

OBITUARY RECORD.—HENRY AUGUSTUS DU BOIS, M.D., died of paralysis, in New Haven, Conn., on January 13th, at the age of seventy-three years. He was the sixth lineal descendant of Jacques Du Bois, a French Huguenot, who came to Ulster County, New York, in 1675. He received his Arts degree from Columbia College, New York, in 1827, and the degree of M.D. from the College of Physicians and Surgeons, in 1830. The degree of LL.D. was conferred upon him by Yale College, in 1864; and in the same year he was elected a member of the Academy of Arts and Sciences of Connecticut.

NOTES AND QUERIES.

LEAD-POISONING IN CANNED VEGETABLES.

To the Editor of THE MEDICAL NEWS.

SIR: In the report of one of Dr. Billings's lectures on "Municipal Hygiene," as published in THE MEDICAL NEWS of December 22, 1883, there occurs the following sentence, which requires an explanation from me.

"A few cases of lead-poisoning have been reported (one, by the way, in THE MEDICAL NEWS for September 8, 1883, by a Maryland physician; but since, Dr. Billings has had those cans examined by and analyzed under the supervision of Prof. Remsen, and no trace of lead could be found in the contents)." At the time Dr. Billings asked me for some of the corn for examination I was only able to procure one out of the four dozen cans put up by the family poisoned; the rest having been consumed or thrown away. I am sorry I could not have sent him more than the one, as my own examination showed that lead was not present in the contents of all the cans. I examined three of them. One of these gave only a brownish discoloration with sulphuretted hydrogen, and I did not carry my examination further, as that delicate test did not show the presence of lead.

The contents of the other two gave the characteristic reactions with sulphuretted hydrogen, ammonium sulphide, potassium iodide, and potassium chromate. As I was careful to have pure reagents and to follow carefully the directions for qualitative analysis, given in the standard works on the subject, I am certain lead was present in the contents of two cans.

I also ascertained there were two different lots of cans purchased.

This explanation is sent only in the interest of truth, and to aid in those investigations that are taking place in this country and Europe to detect danger to the public health, if any exists, from the use of canned food.

WM. E. MAGRUDER, M.D.

OLNEY, MD., January 4, 1884.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 7 TO JANUARY 14, 1884.

BROWN, P. R., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Huachuca, A. T.—*Par. 9, S. O. 119, Department of Arizona*, December 27, 1883.

EGAN, P. R., *First Lieutenant and Assistant Surgeon.*—Upon reporting of relief to proceed without delay from Fort Huachuca, A. T., to Fort Apache, A. T., and report to the commanding officer for duty at that post.—*S. O. 119, Department of Arizona*, December 27, 1883.

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

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ORIGINAL LECTURES.

THE TREATMENT OF SYPHILIS.[1]

A Clinical Lecture.

BY PROF. DUJARDIN-BEAUMETZ.

GENTLEMEN: In the exposition which I desire to make of the treatment of syphilis, I shall endeavor to be as brief and as practical as possible. I shall, then, put aside the great questions which a consideration of treatment raises, and especially those pertaining to public hygiene and prophylaxis which are so earnestly discussed to-day, and shall concern myself exclusively with the means which will enable you to cure as speedily as possible the various manifestations of venereal disease.

Syphilis is unfortunately a malady whose frequency increases daily, and whose symptoms you will in your practice have to combat a great many times.

I shall not, then, discuss before you the origin of venereal disease. It is probable that, like the greater number of diseases which afflict humanity, syphilis was known in the first periods of the human race, and if we may credit Parrot, the prehistoric man was not exempt from it. Nor shall I discuss the necessity of mercury in the treatment of syphilis; this question seems decided at the present day, and it would be to gainsay the clearest evidence not to admit the efficacy of mercurials in this disease. I am well aware that abuses have been made of this remedy; that not all cases of syphilis are curable by quicksilver; that the treatment is not suitable to all periods of the malady; but what I cannot understand is the obstinacy of a small, though influential, number of physicians, who refuse to acknowledge, as demonstrated, the marvellous action of mercury in a great many cases of syphilis.

It suffices to have been an attentive observer, during one's practice, of a few cases of syphilis with cerebral complications of great gravity, and to have seen them disappear as by enchantment under the influence of an energetic mercurial course, to compel one to admit, without reservation, the therapeutic power of mercury in syphilis. I am going, then, to set forth at some length the fundamental principles of this hydrargyrate medication.

Considered by the writers of antiquity as one of the most energetic poisons, mercury was used externally by the Arabs; Rhazes recommended mercurial applications as part of the treatment of tinea, of scabies, of the mange, and of all wounds of bad nature, and as it is the property of syphilis to produce cutaneous ulcers of foul aspect, it is easy to understand how, from the appearance of the epidemic of syphilis at the end of the fifteenth century, this medicament came to be used in the treatment of these sores. It is then a matter of history that Marcellus Cumanus in 1495, Gasper Torella in 1497, Conrad Gilini still later employed mercurial ointment in the treatment of the grave cutaneous affections which were observed in France and Italy as a sequence of the siege of Naples.

The introduction of mercury into practice as an internal remedy was of later date, and it was not till 1536 that Matthiolus dared prescribe it internally for syphilis, and since this epoch down to the present time, the medical profession has not ceased to administer this medicament, and to note its good effects. Notwithstanding the multiplicity of works on the subject, we are ignorant of the *modus operandi* of this remedy, and while no medicine is in so general use in syphilis, there is none whose physiological action is more obscure. I am nevertheless going to give you some information which we possess relative to the ways of absorption and elimination of mercury, and I will do this, taking as my principal guide the remarkable work which my colleague in this very hospital, Dr. Hallopeau, has devoted to this medicament.[1] Mercury may penetrate the economy, either by the digestive tube, by the respiratory passages, or by the skin, and therapeutics utilizes all of these ways.

There has been much discussion about the penetration of mercury by the skin. It is known, in fact, that quicksilver when finely divided, as it is in mercurial ointment, may enter the economy through the skin, when not devoid of its epithelium, and this is one of the methods by which salivation may be most rapidly produced. How does this penetration take place? Some, as Overbeck, Eberhards, Oesterlen, have pretended that mercury in the metallic state penetrates the subcuticular vascular network. Others, as Rindfleisch, have maintained that this penetration of mercury in the metallic state is impossible, and that it is only after having been transformed into a soluble chloride by the sudoral secretion, that quicksilver enters the economy. The recent experiments of Fleischer give much support to these last views.

It is then in the state of chloride, and especially of bichloride, as Mialhe[2] affirms, that all mercurial prepa-

[1] Translated from advance sheets by E. P. Hurd, M.D., of Newburyport, Massachusetts.

[1] Hallopeau. De Mercure: Thesè d'agregation. Paris, 1880.

[2] Mialhe has pretended that mercury does not penetrate the system except in the state of bichloride, or in the form of an alkaline hydrargyrate-chloride. The protoxides undergo transformation, he thinks, into protochlorides, and then into bichlorides.

Voit admits the same thing—to wit, that the suboxides undergo transformation into calomel, and the oxides into bichloride; these last unite with the chloride of sodium and albumen of the blood.

The recent investigations of Bucheim and of Ottingen and those of Otto Graham make it appear probable (contrary to the views of Mialhe) that the protochloride combines with albumen to form an assimilable albuminate of protoxide of mercury.

Bellini has studied the modifications which the chlorides, the bromides, and the iodides undergo. Calomel, according to him, dissolves in the stomach and in the intestines under the influence of chlorides and lactic acid, being transformed into a double chloride of mercury and sodium and into lactate of mercury. The iodides and the bromides undergo a similar change, being transformed into double salts under the influence of the alkaline chlo-

rations enter the blood, combined, be it understood, with the albumen of the blood, thus constituting a double albuminate or peptonate of hydrargyrum and of sodium.

When once it has penetrated the blood, mercury, after having sojourned a variable time in the economy, is eliminated by divers emunctories, in particular by the kidneys, by the feces, by the milk, by the sweat, and by the saliva. The duration of this elimination depends on the duration of the mercurial treatment, and when this has been very prolonged, one may find mercury in the urine for several weeks after the treatment has been discontinued. Mercury seems, in fact, to fix itself in different viscera, and in particular in the liver.[1] It has even been maintained that it is this fixation of mercury in the bowels which provokes those osteocopic pains so frequent in the advanced periods of syphilis. This interpretation is absolutely erroneous, for there are syphilitic patients who, never having followed any mercurial treatment, have osteocopic pains of the most violent kind, and these pains seem to be mitigated under the influence of mercurial preparations.

Among the channels for elimination of mercury, there are two which interest the therapeutist—the mammary and the salivary glands. The fact of elimination by the milk, enables us to apply to the treatment of syphilis in the new-born child, the administration of mercury to the nurse. The fact of elimination by the saliva explains the cause of the salivation which so frequently attends the mercurial treatment. It is, in fact, maintained that it is the presence of chlorides of mercury in the saliva which is the point of departure of the irritation of the mucous membrane of the gums. At the same time this point of pharmaco-dynamic action demands to be studied anew, for the salivation seems to depend especially on the mode of administration of the mercury. Very easily provoked by cutaneous inunctions, it is exceptionally produced by hypodermic injections.

Can we find in the physiological and toxicological action of mercury the explanation of its anti-syphilitic action? Unhappily, no; and the study of mercurialization, whether slow and chronic or sudden and acute, observed so often in men who work in industries where mercury is in use, does not furnish us any data for the solution of this important therapeutic question.

It has been said that mercury acts on the blood-globules and the plasma; this may be true in the normal state, and when it acts as a poison. But this is the very opposite of what takes place in syphilitic patients, where one constantly sees under the influence of a well-regulated treatment, the number of red globules augment, as well as their richness in hæmoglobin. The experiments of Wilbouchewitz, of Moscow, of Keyes, of Robin, of Schlesinger, are absolutely confirmative in this respect. Mercury cures syphilitic anæmia, but it is powerless to benefit other anæmias. It is necessary then to admit that mercury possesses a specific property in the treatment of syphilis, and we are obliged to content ourselves with the data which are furnished us by empiricism and tradition concerning the antisyphilitic action of mercury.

The absorption of mercury may take place, as I have told you, by three ways: by the skin, by the lungs, by the stomach. Therapeutics utilizes these three modes of introduction, and thence result three different modes of treatment of syphilis: the dermic and the hypodermic method, the respiratory method, and finally administration by the alimentary canal.

Let us examine the advantages and disadvantages of each of these methods:

The dermic method is the most ancient. We have seen that it was by applications of mercurial ointment that attempts were first made to cure syphilitic sores. This method is still employed at the present day; nevertheless, since the improvements in hypodermic injections of our time, the dermic method is much less used than formerly. Frictions with mercurial ointment, if they cause mercury rapidly to enter the economy, have the very serious objection of speedily determining salivation. For these inunctions mercurial ointment is used; the "fortior" and the "mitior." The stronger ointment is called the Neapolitan cerate. As it is generally admitted that mercury does not penetrate the system till it has been subjected to the action of the sudoral secretion, the rule has been to practise these inunctions on parts of the skin where the sweat glands are the most numerous, as in the arm-pit, the groin, the soles of the feet. Denis Dumont has even proposed, under the name of *Neapolitan hose*, a very convenient method for making these applications, especially when the patient wishes to conceal the treatment which he is pursuing. This method consists in making the patient put on, at bedtime, a pair of *hose* or *long stockings*, the interior of which has been medicated with Neapolitan ointment. As for the frictions, they are repeated once or twice a day, according as one wishes to obtain a more or less rapid action. The rubbing lasts from five to ten minutes, and when once finished, it is the custom to wash the parts where the inunction has been made, to avoid the local irritant action determined by prolonged application of the mercurial pomade.

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rides and lactic acid. A part of these salts enters the circulation, another part is transformed into sulphide of mercury in the large intestines, and eliminated in the feces. (Rindfleisch, Arch. de Dermatol., t. ii. p. 309. Overbeck, Mercure und Syphilis, Berlin, 1861. Hallopeau, Th. d'agregation, 1878. Voit, Physiologie, Chemische Untersuchungen, 1 Heft, Augsbourg, 1858. Blomberg, Nagra ord om quicksellfvrets absorpcion, af organismen, 1867.)

[1] The elimination of mercury is effected by the kidneys, intestines, mammary glands, perspiratory and salivary glands. The utility of this last kind of elimination has been much disputed of late years, yet Bernaski has determined the presence of mercury in the saliva taken directly from Steno's duct.

Personne, Binz, Lewald, and Klink have found mercury in the milk of nurses submitted to mercurial treatment.

Riedérer has examined experimentally the quantity of mercury eliminated by the different emunctories. In an animal which had taken, in twenty-nine days, nearly two grammes of mercury, during this time four per cent. was found in the feces, nine per cent. in the urine, and during the succeeding eighty-one days there was still found in grammes and fractions of a gramme, .0568 in the feces, .0040 in the urine, and .0026 in the liver.

Mayencon and Bergeret have studied the rapidity of elimination of the mercurial preparations. Experiments show that the greater part of the medicament is immediately eliminated in the urine, and that another part, after having become fixed in the tissues, is eliminated very slowly and insensibly, insomuch that several days after the cessation of the mercurial treatment the presence of mercury is detected in the urine. (Bergeret and Mayencon, "Clinical Means for Recognizing Mercury in the Excretions, and principally in the Urine;" Lyon Medical, t. iv., 1873, p. 179.)

Mercurial baths form a part of the dermic method of treatment. Here the penetration of the mercury into the system is much less active, and if baths of corrosive sublimate render some service in therapeutics, it is simply by their local action. These baths, the only mercurial baths employed, contain ʒv of corrosive sublimate for a full bath.[1] You can add to these baths common salt or sal ammoniac. It is also the local effect that is sought for when the various mercurial plasters are prescribed, the most known of which is that of Vigo.

The hypodermic method of the treatment of syphilis is of quite recent date, and thanks to the improvements which have been made in the liquids used in these injections by Martineau and Delpech, this method, which has all the advantage of the dermic mode without the disadvantages, namely, a very prompt and energetic action, without salivation, tends to take the place of the dermic method. It was Hebra and Charles Hunter who, in 1863, first practised sublimate injections in the treatment of syphilis, and in 1868 Liegeois popularized this method in France, but these first trials were unsatisfactory, and the method was abandoned. Corrosive sublimate is in fact very irritating, and it is easy to see that these subcutaneous injections, very painful as they are, might cause grave local lesions. For the solutions of corrosive sublimate and of chloride of sodium, which were employed by Hebra, Charles Hunter, Lewing, Liegeois, and Tachard, it was proposed to substitute the cyanide or the bicyanide of mercury as Mandelbaum and Guntz proposed. Others, as Luton and Fürbringer, advised injections of metallic mercury, rubbed up with glycerine and gum arabic. But all these solutions were always painful, and it was only by combining albumen and peptones with corrosive sublimate that solutions were obtained having a very feeble irritant action. This is what has been accomplished by Neumann, Bamberger, Terrillon, and especially Martineau and Delpech, who, in uniting chloride of ammonium with peptones and with corrosive sublimate, have made a solution of mercuric ammoniacal peptone which is absolutely neutral, keeps perfectly, and rarely determines local lesions when properly injected.[2]

[1] The formula of corrosive sublimate baths is as follows:

1.

℞.—Bichloride of mercury, ... 2 parts.
Alcohol, ... 5 "
Distilled water, ... 200 " —M.

2.

℞.—Bichloride of mercury, ... 3 parts.
Chloride of ammonium, ... 3 "
Water, ... 1000 " —M.

3.

℞.—Bichloride of mercury, ... 1 part.
Chloride of sodium, ... 1 "
Warm water, ... 100 " —M.

[2] Neumann maintains the advantage of subcutaneous mercurial injections; he lauds especially solutions of corrosive sublimate with albumen and peptones as being but slightly, if at all, irritating. Bamberger uses the following solution: To 20 parts by weight of albumen, as pure as possible, add 30 parts by weight of distilled water, and filter. Mix 10 parts by weight of this albuminous solution with 6 parts by weight of a 5 per cent. solution of corrosive sublimate, and 6 parts by weight of a 20 per cent. solution of common salt, and 8 parts by weight of distilled water. Let it stand two days, and filter with care. 320 grains parts by weight of this solution contain gr. ij$\frac{3}{10}$ of metallic mercury.

It is necessary, in order to avoid accidents, to make these injections as deeply as possible. And here, as in the case of subcutaneous injections of chloroform, you ought to thrust your needle perpendicularly into the tissues; therefore, it is almost always in the hips that we make these injections. In the thousands of subcutaneous injections which Martineau has performed in the Hospital of Lourcine, he has never observed any grave accidents. At the same time, it is well to remember that in the majority of cases these injections are painful, and that they leave behind them an induration of tissue which lasts for some time. There are even patients, females especially, so hyperæsthetic that they cannot bear these injections. Despite these cases, which are exceptional, the hypodermic method is excellent, especially in hospital practice, being sure and speedy. In private practice this mode of treatment is more difficult to carry out; you ought then to reserve it exclusively for grave cases, where you want a prompt and energetic action, as in syphilis of the brain and spinal cord. These injections contain in each syringeful, as you well know, gr. ⅛ of corrosive sublimate. When you do not wish to go to the trouble of preparing the rather complex solution of Delpech, you can prescribe subcutaneous injections made as follows:

℞.—Powdered peptone (Catillon), . 3 parts.
Chloride of ammonium, pure, . 3 "
Corrosive sublimate, . . . 2 "
Glycerine, ... 50 "
Water, ... 150 " —M.

Terrillon has made trials of hypodermic injections of the peptonates of mercury. He made use of Bamberger's solution, which is as follows: Take of meat peptones, gr. xv; water, f ʒj$\frac{6.9}{100}$. Filter; and add: Solution of corrosive sublimate (1:500), f ʒv$\frac{4.4}{100}$; solution of chloride of sodium (20 per cent.), f ʒiv$\frac{3.3}{100}$. Distilled water sufficient to make f ʒiij$\frac{3.5}{100}$.

Each f ʒvss of this solution contains gr. ⅛ of mercury. In combination with peptones, these injections cause no pain, if made deeply in the subcutaneous tissue. Delpech has advised the following formula for the preparation of mercuric ammoniacal peptones. Take of

Dried peptone (Catillon), ... 3 parts.
Chloride of ammonium, ... 3 "
Mercuric chloride, ... 2 " —M.

This powder is one-fourth part corrosive sublimate; hence one gramme contains gr. iij¼ of corrosive sublimate. From this formula divers preparations are made:

1. Hypodermic injections—

℞.—Powder of peptonate of mercury, . . 1 part.
Distilled water, ... 50 "
Glycerine, ... 10 " —M.

Each syringeful of this solution corresponds to gr. ⅛ of corrosive sublimate.

2. A solution which is taken internally—

℞.—Powder of peptonate of mercury, . . 1 part.
Distilled water, ... 200 "
Glycerine, ... 50 " —M.

Every gramme of this solution contains 1:1000 of corrosive sublimate.

3. Pills—

℞.—Powder of peptonate of mercury, . . ʒss
Opium, ... grs. viij
Powder of guaiac, ... ʒss
Powder of ext. licorice, sufficient to make 100 pills.

Each pill contains gr. $\frac{1}{15}$ of corrosive sublimate.

Each syringeful of this solution contains gr. ⅙ of corrosive sublimate. These injections are practised every day or every second or third day, according to the urgency of the case, and I shall return presently to the doses, when I come to the syphilitic complications.

The respiratory method, which has for its basis mercurial inhalations, is of very ancient origin. It has been restored to practice the past few years by Langston Parker, of England, by Bumstead, of New York, and by Horteloup, in France. This method, which may be called *dermo-pulmonary*, consists in placing the patient in a box in which are burned troches containing cinnabar or corrosive sublimate. The penetration of vapor is effected chiefly by the lungs. The box, being of loose construction, allows the fumes to escape into the outside air. I have never employed this *dermo*-pulmonary method, but it seems to me every way inferior to the hypodermic mode, and is certainly less precise and sure. In fact, this kind of treatment is not likely ever to be popular.

I come now to the last method of administration, namely, that by the alimentary canal, which is by far the most available and practical. Mercury is employed under all its forms;[1] metallic mercury, the most common preparation of which is the blue pill; bichloride of mercury, which is the active ingredient of the liquor of Van Swieten; the pills of Dupuytren; and the ordinary solution of the British Pharmacopœia; the protiodide (Ricord's pills); and the biniodide, which is contained in the syrup of Gibert. These are the forms most in use in our country. There are, however, a prodigious number of hydrargyrate preparations in the shops of pharmacists—pills, solutions, potions, pastilles—whose formulæ you will find in most of your treatises on syphilis. What salt of mercury ought you to choose? It may be replied that all the preparations I have just enumerated are suitable. At the same time, for my part, I prefer the bichloride and biniodide, to all the others, and I consider the bichloride, and especially the solution of Van Swieten which contains it, as the most active in the first periods of syphilis, of all preparations given by the mouth. This preference is not only based on the results of my practice, but it is also in conformity with what we know of the introduction into the economy of mercury, which always enters the circulation in the state of bichloride. If you employ the bichloride, whether in the form of Dupuytren's pills or Van Swieten's liquor, I advise you always to administer these preparations with food or with milk; you will thus avoid, as far as possible, the irritant local action of corrosive sublimate on the alimentary mucous membrane. Such are the principles of the mercurial treatment of syphilis. I must now point out certain rules which should guide you in this treatment—when you ought to commence it, and when you ought to leave it off. But before proceeding to this part of my task, I must say a few words about the accessory modes of treatment.

(To be concluded.)

[1] Following are some of the forms of administration of mercury by mouth:

1. *Blue pills.* The formula is too well known to need repetition here.

2. *Sedillot's pills.* Each pill contains gr. iss of mercurial ointment, with gr. $\frac{9}{10}$ of castile soap, and gr. $\frac{6}{13}$ of licorice powder.

3. *Bichloride of mercury.* Van Swieten's formula is as follows:

℞.—Bichloride of mercury, ... 1 part.
Rectified spirits, ... 100 "
Pure water, ... 900 " —M.

One teaspoonful contains gr. $\frac{1}{13}$ of corrosive sublimate.

4. *Mauriac's modification of Van Swieten's liquor—*

℞.—Spirits of peppermint, ... 4 parts.
Hydrarg. bichlorid. . . . . 1 "
Alcohol, ... 95 "
Syrup of morphia, ... 250 "
Orange-flower water, ... 100 "
Distilled water, ... 50 " —M.

This preparation is twice the strength of Van Swieten's.

5. *Dupuytren's pills—*

℞.—Hydrarg. bichlorid., ... gr. ⅙
Ext. opii, ... gr. ⅓
Ext. guaiac, ... gr. ⅔ —M.
For one pill.

6. *English anti-venereal drops—*

℞.—Crystallized perchloride of iron, . . 1 part.
Corrosive sublimate, ... 1 "
Distilled water, ... 1000 " —M.

Every f℥ij contains gr. ⅙ of corrosive sublimate. A medium dose, one teaspoonful.

7. *Brazilian electuary of Carneiro, containing calomel—*

℞.—Calomel, ... gr. xv
Powdered sarsaparilla root, . . . ℥vij
Powdered senna, ... ℥iijss
Simple syrup, sufficient to make an electuary.—M.

Every f℥ijss contains gr. $\frac{1}{15}$ of calomel. Full dose, ℥ijss.

8. *Ricord's pills—*

℞.—Hyrarg. protiodid. . . . . gr. xlv
Ext. lettuce, ... gr. xlv
Ext. opii, ... gr. xv
Ext. hemlock, ... ℥iss —M.
F. S. A. 60 pills.

9. *Formula of French Codex—*

℞.—Hydrarg. protiodid. . . . . gr. ¼
Ext. opii, ... gr. ½
Conserve of roses, ... gr. ½
Licorice root, sufficient for one pill.—M.

10. *Gibert's pills of biniodide—*

℞.—Biniodide of mercury, ... gr. i½
Iodide of potassium, ... gr. lxxv
Pulv. acacia, ... gr.vijss—M.

F. S. A. 20 pills. Two of these pills contain gr. ⅙ of biniodide of mercury.

11. *Syrup of Gibert—*

℞.—Biniodide of mercury, ... 1 part.
Iodide of potassium, ... 50 "
Water, ... 50 "
Simple syrup, ... 2400 " —M.

Every tablespoonful contains gr. iij¾ of biniodide.

ORIGINAL ARTICLES.

A CASE OF WORD-BLINDNESS, WITH IMPAIRMENT OF THE FACULTY OF SPACE ASSOCIATION.

BY ALLAN McLANE HAMILTON, M.D.,
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IT is rare indeed to find the sudden development of an aphasia the immediate expressions of which are recorded by the patient himself, and we are usually obliged to depend upon the statements of

the patient after his recovery, or those of persons with whom he may have been at the time of the cerebral accident. It is true that evidences of agraphia are sometimes disclosed by the letters of the patient, but I have never met with an instance which so beautifully shows the embarrassment as that I now present, the patient being a printer, who was engaged in setting up a legal brief when he was attacked. Very fortunately the copy was preserved, and I am enabled to reproduce the printed column, with all its original errors, with corrections made by the patient during his convalescence. It will be seen that the patient's difficulty began rather suddenly, and it was not until the seventieth answer was reached that he began to make mistakes, and as he advanced his confusion increased.

The case also presented various curious symptoms which I am convinced are of the utmost importance, as they show an impairment of what may be denominated the sense of fitness, or direction, and an inability to properly appreciate the relations of space.

William H. M., is 33 years old, a printer, and a man of excellent habits. He has not had syphilis and there are no evidences of cardiac or lead disease; his family history is good, his mother and father being alive and well. He is a bright, skilful workman, and has been engaged at "book-work." He made few mistakes in composition, and was looked upon as an industrious, intelligent man. According to his own story he had had domestic trouble for a short time previous to October, 1881, was worried, and lost flesh and strength. He, for several of the early days of October of that year, felt distressed about the head, and had slight vertical pain, but no vertigo. Upon the afternoon of the 10th he had a sense of impending trouble, but no idea of his real condition until the foreman of the shop called his attention to the remarkable character of his work. His "stick" contained matter that was full of mistakes known to the craft as "doublets." In almost every line he had repeated one word several times, and many others were transposed. In other places the types were upside down. He could not correct his mistakes, but made fresh blunders. At half-past five he still felt badly, and was obliged to stop work. He went to a neighboring eating-house, where he had frequently dined, and though the door-knob was large and easily reached, he had considerable difficulty in finding it. After entering the place he staggered and could walk only with difficulty, and dragged his right foot. He could not ask for what he wanted, although the bill of fare was before him, and he was considered drunk. He managed to leave the place, and went home; his right leg remained numb and weak, and he fell frequently. He remembered that while walking he was inclined to proceed in a semicircular direction, mainly toward the right, and his face was turned to that side. He next became unconscious and remembered nothing until next morning, when he was found by persons who had broken into his room. He heard all questions, but could not reply. He could move his right leg feebly, as well as his arm. He was next taken to the Chamber Street Hospital, where he remained for two days. So far he could not speak, but within a month began to talk, but could not read. He could repeat words, however, after another person.

I first saw the patient about the end of February, 1882. He was a man of spare build, rather poorly nourished, and had an annoying cough. He presented a poorly marked paresis of the entire right side, but there was very slight clumsiness in his gait. The dynamometer showed that he could force the index about twenty degrees further around on the left side, and his hand-grasp was stronger on this side. The right angle of the mouth was lower than the left, and there were transitory fibrillary tremors of the facial muscles. No lead-line was to be found, and there was no marked extensor paralysis—he being able with his hands upon the table to lift a considerable weight (a pound and a half) placed upon the dorsal surface of the fingers. Tactile sensibility and temperature were diminished on the right side. He had occasional frontal headaches. The left pupil was very slightly dilated; there was no diplopia. He had control over his tongue, and there was no deviation of the uvula, or irregularity of fauces. The reflexes were all diminished on both sides. There were no darting or stabbing pains. There was no cumulative tremor when a cup or glass was carried to his mouth. The functions of the pelvic organs were unaffected. Specific gravity of urine 1020; normal. Heart and lungs healthy, with exception of slight bronchitis. Shortly after his seizure his right arm would often be spasmodically drawn across the chest, and at the same time there would be slow spastic flexion of the leg. These seizures were often repeated and of short duration. An ophthalmoscopic examination was made which revealed inflammatory changes in the vicinity of the macula of right eye. In the left large patches of retino-choroidal atrophy were found. Both optic disks were atrophic.

The patient was emotional, and sometimes cried quite easily. He was able to converse intelligently, and memory was apparently unimpaired, and he had had no hallucinations or delusions. The interesting feature of his disease was shown when he attempted to read. He did so with great difficulty, going over the ground slowly and referring to previous words whose images he seemed to have retained. He read substituted words which in length and form resembled in some degree those of the printed matter; for instance, *New Haven* for *New Hampshire; situate* for *stated; continue* for *countersign; desirious* for *declares; Alderman* for *Anderson*, etc.; but with proper names he had the greatest difficulty: *George W. Hunt*, a name printed in the paper I asked him to read, was rendered *John H. Hunt*, and he made several attempts and finally gave up in disgust. He prefixed unnecessary articles to whatever words he was asked to read. He knew the denomination of coins from their size and color, but could not add them. Though his trade is one that should make him expert in estimating distances, he could not when asked to make a line of certain length approximate the true space. He always fell short of the required distance. A line three-eighths of an inch in length was said to

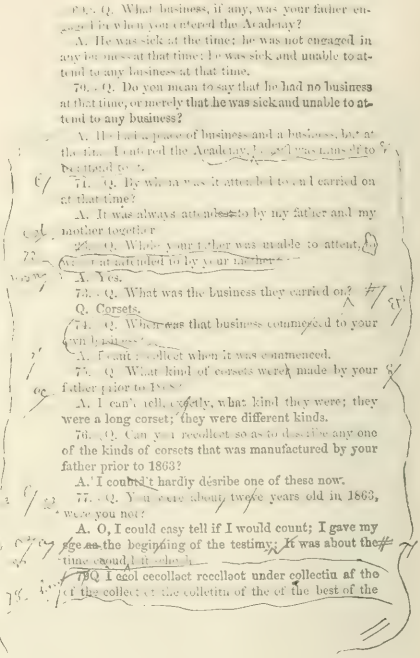
represent half an inch, and three-fourths of an inch, one inch. He had no idea of adjustment. When told to place his index-finger on the figure twelve on the dial of my watch he could not do so readily; and when told to find a point midway between twelve and six, he selected four. It must be remembered that in this case there were no changes in the muscles of the eyeballs, no diplopia or hemiopia; and I looked for these symptoms carefully. He repeated his mistake over and over when repeated tests were tried. Upon more than one occasion he made singular blunders in the location of objects. One of his duties was to place the knives and forks at the patients' plates. He once or twice placed two forks or two knives at the same plate. At other times he placed the knife and fork at one plate with the points reversed, while at other plates they were properly arranged. When his attention was called to these things he always expressed great surprise or annoyance, but invariably repeated the mistakes when he next attempted the act.

By accident a very curious mental condition was discovered—a loss of appreciation of direction or space by association. As a rule, the normal individual, when aware of the direction of one point of the compass, is able to designate the others. If he is placed with his face to the North, he knows that the East is on his right hand, and the West on the left, and the South behind him. In this patient the case was different, and both Dr. O'Brien and myself repeatedly tested this lost faculty. It made no difference how he was placed, for even with the knowledge of one point, he was apt to transpose all the others. He knew which was his right hand, and which was his left, but could not associate them with the direction. Even when three of them were properly designated after prompting, he would be apt to reapply a term already used to the fourth. This blunder was not the result of ignorance; he had a fair knowledge of geography, he was not insane, and his memory of recent affairs was unusually good. There was some loss of taste and smell.

This man slowly improved, and was discharged with no trace of asemasia, but with slight weakness of the right side. Before he left the hospital he presented us with the appended slip which he had a few days before corrected.

I related this case to the members of the Section in Practice of Medicine of the New York Academy of Medicine, and my apology for referring to it again is the production of the proof-sheet, which gives the case greater interest than its bare recital. Dr. Seguin at that time said that he had himself seen several cases in which the peculiar loss of the faculty of location had been a feature, and in one case the patient, who, by the way, had no agraphia, was very apt to turn things the wrong way or upside down. The patient, when he attempted writing, would turn the pencil around two or three times, and would invariably stop with the pointed end up.

I have noticed this peculiar symptom in other cases. In one—that of Dr. Allin—where there was word-deafness, and a lesion of the occipital convolution on the left side, the patient was very liable to reverse things. Dr. Ball, who described the case, says: "The only exception to this fact (the spacial relation of objects,) was a singular symptom which annoyed him for several months, viz., a



tendency to reverse the natural position of objects which he handled, such as table-knives, spoons, pencils, canes, etc. He immediately recognized his mistake, however, and corrected it, but always spoke of the inclination as irresistible." Dr. Seguin, in commenting upon this case, was disposed to account for the patient's trouble as an impairment of muscular sense, and he admits that he has never met with such a condition before. "If he did not use his eyes in prehending objects with his right hand, he would find that he had seized them by the wrong end. He sometimes found himself standing with the head of his cane on the ground and its point in his hand. Frequently, in my presence, he essayed to grasp a pen or pencil with his head turned away, and repeatedly he found himself holding the object by the wrong end, and after this turning it over three or four times to get its outlines." I have seen another case in which the same difficulty existed, the patient taking his cane by the wrong end, and he often turned his latch-key, endeavoring to insert the wrong end in the keyhole. He *always* buttoned his clothing improperly

—getting the buttons in the wrong holes. In this case there was no apparent word-blindness or deafness. The patient was slightly paretic on the right side, there was an exaggerated knee-jerk upon that side, and other indications of a slow arterial degeneration, and a lesion probably in the cortex.

The lost sense of direction and localization could hardly be described under the head of *apraxia*—a term which Kussmaul applied to a state in which "the memory for the uses of things is lost as well as the understanding for the signs by which the things are expressed."

PROF. CARL BRAUN'S ANTISEPTIC OBSTETRICAL METHODS.

BY W. W. JAGGARD, M.D.,
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PROF. CARL BRAUN deserves a prominent place among the great men who have aided the development of antiseptic methods in obstetrics. Although no micrococcus, bacillus, or spirillum owes its name to his researches, antiseptic methods were practised with critical exactness in the Vienna Lying-in Hospital before the discoveries of Weber, Billroth, Pasteur, Schwann, Koch, and Lister were made known.

Boër, Braun's immediate predecessor, Smellie's pupil, imbued with English obstetrical ideas—at marked variance with Continental doctrines—effected a partial substitution of German by English methods in the Vienna Lying-in Hospital, which resulted in the rejection of obsolete instruments, cumbersome obstetrical beds, chairs, tables, and pillows, the heritage of previous centuries.

From March, 1849, to September, 1853, Braun acted as sole assistant in the clinic, assuming his present position in 1856. Owing to the precedent established by Boër, and to Braun's individual convictions, English notions in obstetrics have flourished in Austrian soil, and to-day there exists a remarkable identity of obstetrical doctrines in Vienna and the United Kingdom, presenting a striking contrast to the teachings of Germany, France, and America.

Endowed with a philosophical intellect, developed by broad, profound, critical study and a fabulous experience of thirty-four years of uninterrupted labor in the largest existing obstetrical hospital, Braun has made invaluable contributions to every department of obstetrical science.

It is the object of this paper to sketch briefly one of these contributions: Vienna Antiseptic Obstetrical Methods.

I. *Hospital Ventilation.* Ten wards of the so-called new wing of the Vienna General Hospital have been used, *without interruption*, from 1834 to the present time, for the practical instruction of physicians in obstetrics. In 1873 the obstetrical wards were divided into three departments. The first and second clinics, under the control of Profs. Carl Braun and Josef Späth, respectively, were devoted to the practical instruction of physicians, while the third clinic was assigned to Prof. Gustav Braun for the education of midwives. In each clinic one ward, termed the lying-in chamber, containing eighteen or twenty beds, is set apart for parturient women, while pregnant and puerperal patients occupy the remaining rooms. The reception of women in labor alternates, every twelve hours, between the three clinics, so that once in three days there is an interval, when the beds of each lying-in chamber have either no occupants at all or a few accidental cases coming from the "pregnant" wards. This period of time is technically termed "empty day," and exercises an important function.

The paramount importance of perfect ventilation received immediate recognition upon Braun's accession to the control of the hospital.

Profs. Braun,[1] Späth, and Böhm devised, in 1860, and carried into execution in 1863, a system of hospital ventilation and heating, which has continued, with few modifications, in effective operation for twenty years. This system consists essentially of a large furnace, constructed in each ward, and a system of air-conduits, which can be used for change of air, with or without heat. The furnaces draw well, heat the air streaming into them to 40–80° C., and spread through all the wards a very agreeable, lasting, refreshing, *odorless* warmth; they heat great quantities of air, 80–200 cubic metres per hour and individual, of cold, fresh air in severest weather of −20° C.; preserve a constant temperature of +16–20° C.; give eight times the change of air obtained by earlier methods; save twenty-five per cent. in money in comparison with former modes, and approximate the results of the best modern centralization methods by steam or hot water.

Simple anemometrical indicators are placed in the vertical air-tubes to determine the direction and velocity of air-currents, and to regulate the register of the valves in the conduits of the entering and departing air.

Drying and warming chambers for heating linen to 100° C., are connected with small furnaces in each ante-room. Each ward is thus heated and ventilated separately, while the excess of caloric is utilized in drying and heating linen. Water-closets of an approved English model are connected with every ward.

Owing to the order of receiving women in labor, the lying-in chamber is vacated every third day, the large windows upon both sides of the room are thrown open, and every article of furniture or apparel is abundantly aired.

Pettenkofer's precept, that each individual requires, hourly, a minimal allowance of sixty cubic metres of fresh air, meets with practical recognition in this method of ventilation. Braun says upon the subject of hospital ventilation (*Gynäkologie*, p. 884):

"I have arrived through practical observation at the recognition of the fact, that the rapid and effective prevention of putrefaction by means of generous and

[1] Braun's communication, Medizin. Jahrbüch. der Gesellschaft der Aertze in Wien, 1874.

adequate ventilation, is to be regarded as a good prophylactic rule against puerperal fever; that not the greater number of puerperal women who are annually cared for in a hospital, and not the greater number of puerperal women in one room, but the insufficient change of air in a cell for one individual in the smallest hospital, is to be regarded as the important factor in the spread of puerperal fever; that puerperal women, therefore, in order to be effectually guarded against puerperal fever, must be isolated, not by insulated houses and gardens, not by stone walls, but by the continuous conveyance of large quantities of fresh, pure, warm air by means of a cheap, practicable, easily executed method."

The Braun-Späth-Böhm system of ventilation, in comparison with other modes, has the advantage of cheapness of construction and operation; it is peculiarly adapted to old buildings, and in respects of simplicity, adequacy, durability, ease of operation, answers to the highest demands of hygiology. This system of ventilation is now in active operation in the General and Rudolph's Hospitals in Vienna, in the Prague Lying-in Hospital, and in many foreign institutions of similar character.

Recently the administration of the obstetrical department has been separated from that of the General Hospital, and special laundries have been established. The wooden bedsteads have been replaced by iron frames, and the straw ticks have been substituted by iron wire mattresses. Each pregnant, parturient, or puerperal woman receives, as her bed furniture, woollen blankets, clean linen sheets, a rubber blanket, and a pillow filled with horse-hair. Separate bath-tubs and water-closets are assigned to the patients according as they are pregnant, parturient, or puerperal. Pure mountain water is supplied in abundance to every ward. Blankets, and woollen articles of clothing are disinfected in a large, walled-in chamber, by means of superheated air. Finally, there is an annual house-cleaning and white-washing, of more than New England thoroughness.

II. *Treatment during last weeks of Pregnancy.* Upon admission into the hospital, healthy pregnant women are separated from those who have an abnormal temperature, or present other pathological appearances. During the period prior to confinement—a space of four or six weeks—the pregnant woman is compelled to take baths at regular intervals, and her axillary temperature is carefully noted. Her last act before entering the lying-in chamber, is to take a warm bath, in which soap is vigorously applied.

III. *Treatment during Parturition.* Upon entering into the lying-in chamber in the first stage of labor, the woman is put to bed, and her axillary temperature noted in the protocol. If her temperature is pathological, she is transferred at once to another ward. If her temperature is normal, that is, at or below 38° C., she is examined by the attending physician or midwife. Vaginal examination is permitted an individual upon the conditions: (1) that for the space of twenty-four hours preceding, he has not been within the sphere of contagion of any zymotic disease, and that his hands have not come in contact with any wound or cadaver; (2) that his hands are absolutely clean. The importance of the second condition is difficult of exaggeration in a land like Austria, where the minimal consumption of soap and water is attained.

After a vigorous application of soap and nail-brush in a two and a half per cent. solution of carbolic acid, the hands are dipped into a solution of potassium permanganate (twelve grammes to one kilogramme of distilled water), until they are colored a deep brown; they are then transferred to a solution of concentrated commercial hydrochloric acid in water (sixty-five grammes to four hundred grammes of distilled water), which removes the stain of the chameleon mineral and all organic matter still adherent. They are wiped dry upon large linen sheets, which are constantly renewed.

Before making the examination it is customary to dip the exploring finger into a solution of hydrochloric acid in glycerine (two grammes of concentrated, commercial hydrochloric acid in four hundred grammes of glycerine).

During parturition it is usual to douche from time to time the external genitals with some antiseptic fluid, such as a one-fifth per cent. solution of salicylic acid, a one-tenth per cent. solution of thymol, or a two per cent. solution of carbolic acid. In every case of protracted labor, after rupture of the bag of membranes, sitz baths at regular intervals are enjoined.

When operative procedure is indicated, the vulva and vagina are thoroughly irrigated with a two per cent. solution of carbolic acid before the introduction of any instrument. All instruments, including uterine tubes and catheters, are kept submerged in a two and a half per cent. solution of carbolic acid before use. When the use of instruments has necessitated the invasion of the uterine cavity, it is thoroughly irrigated with a thymol solution after separation of the placenta. Apart from the invasion of the uterine cavity by instruments, there are other indications for its irrigation, which will be discussed later.

The hard rubber tube introduced into the cavity of the uterus is about twenty-five centimetres in length, three centimetres in circumference, and terminates in an olive. The irrigator is the one designed by Leiter, and is simply a large, conical glass flask.

Extreme attention is paid to the exclusion of air from the uterine cavity during the process of irrigation. The disinfectant solution is allowed to displace all air within the pipe of the irrigator and the uterine tube before the latter is introduced within the cavity of the uterus. During the irrigation one hand performs gentle friction upon the fundus, through the abdominal parietes. After the completion of the irrigation, a *bacillus*, containing five grammes of iodoform, is introduced within the uterine cavity; an equal quantity is usually placed within the vagina.

Perineal ruptures and episiotomy wounds are carefully cleansed and immediately united by *serres-fines* or sutures. Contused and lacerated wounds of the vagina are painted over with neutralized tincture of sesquichloride of iron, acetic clay, tincture of iodine, Goulard's extract, thymol, or carbolic oil.

All wound surfaces are finally dusted over with iodoform powder. Incidental allusion to the subject of axillary temperature has already been made, but it demands, at this stage, especial notice. The axillary temperature of each patient is taken and recorded at intervals of three hours, during the entire period of parturition. If the temperature becomes abnormally high, the patient is at once isolated. This rule is enforced with rigorous exactness in each department of pregnant, parturient, and puerperal women.

Winckel, of Dresden, first directed attention to the importance of tokothermometry, and proved that skin-temperature was of more constant diagnostic and prognostic moment than pulse or respiration. Braun has abundantly corroborated Winckel's researches, and the clinical thermometer plays a very active part in the first obstetrical department.

In a recent lecture upon this subject Braun said:

"I am perfectly convinced that every parturient woman in a febrile condition on account of endometritis, with or without *tympanites uteri*, possesses the capability of infecting, during her stay in the room, as the result of which she can become the source of extreme danger to her neighbors; whether the transport of the pernicious influence is effected by the examining finger or by the polluted air penetrating the vagina, I should like to leave undecided. I, myself, hold that the one as well as the other mode of transport is possible, and after exploration or operation in a case of septic endometritis, even after the most careful purification and disinfection of the hands, would not venture to examine, upon the same day, a healthy, pregnant, or parturient woman."

III. *Treatment during the Puerperium.* Immediately after labor the soiled linen is removed, and the patient enveloped in linen sheets heated to 100° C. After the patient has recovered from the fatigue of labor, by a brief period of sleep, the midwife cleanses, with a bit of absorbent cotton, the skin of thighs, abdomen, and vulva, and wipes the surfaces dry with a clean, warm towel. Sponges have been for years banished from the clinic. The rules for the further treatment of the puerperal condition are:

1. A rapid healing of the uterine wound is best effected by quiet, restricted diet, and absolute cleanliness. To maintain cleanliness, it is seldom necessary to inject lukewarm water into the vagina, and still more rarely are we compelled to irrigate the uterine cavity.

2. To prevent the resorption of the pus secreted by the uterine surface, it is necessary (*a*) to fill all the bloodvessels to their maximum capacity, by the exhibition of generous quantities of lukewarm, sweetened drinks, (*b*) to avoid depletion by diuretics, diaphoretics, or purgatives.

3. To lessen the danger of puerperal thrombosis, it is necessary to secure uterine contractions during the third stage of labor, and in the early hours of puerperium, even if no *post-partum* hemorrhage is threatened. This rule is especially imperative during the existence of epidemics of puerperal fever. Uterine contractions may be secured by massage of the abdomen and fundus, application of a binder, or the exhibition of ergot.

4. The lochial secretion must be regulated by complete rest in bed, absolute cleanliness, protection against cold, and careful ventilation of the room.

5. Puerperal ulcers of the genitals, caused by the irritant action of the lochial secretion upon the traumatic effects of labor, must be rendered proof against the resorption of pus, during the first eight days, by the local application of potassium permanganate, basic sesquichloride of iron, or tincture of iodine.

6. To arrest the fermentation process in the blood, or to limit its pernicious tendencies, five to fifteen grains of quinine may be exhibited daily with advantage. Axillary temperature of 39° C., pulse frequency of 100, dysphoria, constitute indications for the immediate use of the drug.

HOSPITAL NOTES.

ST. MICHAEL'S HOSPITAL, NEWARK, N. J.

(Service of DRS. WM. O'GORMAN and WM. PIERSON.)

SUBACUTE TETANUS COMPLICATING SCALDS (THIRD AND FOURTH DEGREES); RECOVERY.

Reported by ARTHUR C. DOUGHERTY, M.D., Surgical Clinical Assistant.

JOHN K., æt. 22; Ireland; laborer; admitted December 15, 1882. Patient is a strong, healthy man, of slight build; habits temperate.

On December 5, 1882, while on night duty at a bone-dust manufactory in this city, the patient, while endeavoring to pass between two large pans of boiling ammonia, slipped, falling partly into one of the pans. At the time of the accident the patient wore a pair of rubber boots, by means of which his feet were protected. During the ten days which intervened from the time of the accident until his admission into the hospital, the patient was treated at his home, the treatment consisting of the external application of carron oil and internal administration of morphine.

Admitted December 15th. Condition on the morning of December 16th: on the right lower extremity, halfway up the thigh, and for the same extent down the leg, patient presents a scalded surface; the burns varying from the third to the fourth degrees. Also a smaller scalded surface of the third degree in the right inguinal region, and severe scalds of third and fourth degrees on right and left arms and forearms. The sloughs were beginning to separate. The patient's tongue was brown and dry, pulse 124 and feeble, and during the preceding night he had been so delirious as to require to be strapped in bed. He was ordered liq. morph. sulph., U. S., ʒij p. r. n., and the liberal administration of milk punch. The local measures were emollient and protective. From that time the patient's condition continued to improve, his temperature gradually falling and his pulse becoming slower and stronger, until the morning of December 23d (the eighteenth day after the accident), when the patient, after having passed a comfortable night, noticed a slight stiffness of the jaws. He said that he remembered having had a slight jerking o his jaws when about half asleep. This symptom,

however, was so trivial that he attributed it to an uncomfortable position of his neck in bed. He had "no sore throat," and no stiffness of the post-cervical muscles. Tetanus being suspected, the patient was ordered large doses of potassium bromide and chloral hydrate. On the following day the jaws were almost locked, and in addition he was ordered pulv. morphiæ sulph., one-fourth of a grain every two hours. As yet the act of swallowing occasioned no clonic spasm, and the nourishment was introduced through the aperture left by an extracted tooth. His temperature and pulse now both began to rise, his tongue again to become dry and brown, although his rest at night appears to have been pretty fair. His temperature continued to rise for four days, at the end of which time it again began to sink toward the normal.

His condition was now as follows: jaws firmly locked, and slight tension of left sterno-mastoid, masseter, and rectus abdominis muscles; pulse 121 and feeble, and tongue dry. The tonic spasms now continued to become more marked, and at the end of six days a condition of pleurosthotonos toward the left side was well developed. The patient was now ordered morph. sulph., gr. j every hour in suppository. During this time the patient continued hopeful, and during the day his mind was clear. Clonic spasms had now and then been present, but until the eleventh day from the beginning of the attack they did not form a prominent symptom. They then became more frequent, being brought on by the act of swallowing, or by touching the patient. In this condition the patient continued for two days, when the clonic spasms began to come on less frequently, and the tonic spasms to relax. During this time the patient obtained some sleep at night, and was able to take nourishment in small quantities. On the seventeenth day the contracted muscles began appreciably to relax, except those of the jaws, which, ten days later, had only relaxed so as to allow the patient to open his mouth one-half an inch. He was now getting about gr. vj of morphine during the twenty-four hours, and in spite of the large amount of the drug he had taken at different times, he did not once exhibit the signs of opium narcosis. He now continued to improve until his discharge, the clonic spasms first disappearing, and after these the tonic spasm, which, however, persisted in slight degree for two weeks or more after the disappearance of the former. As the patient improved, bromide of potassium and chloral were substituted for the morphine. He now ate and slept well, having a famous appetite, and on January 31st (thirty-nine days from the beginning of the attack), as I made my rounds of the wards, the patient was dressed and eating his dinner, in a chair. On February 9th the patient was discharged, cured, his being the fourth case of recovery from tetanus in the history of the hospital. His burns had healed, and attempts had been made to lessen cicatricial contraction as much as possible by passive motion.

Remarks.—This case is interesting from the length of time (eighteen days) which intervened between the receipt of the injury and the first appearance of the lock-jaw, at which time the burns were granulating nicely, and the patient's general condition daily improving. That, throughout the attack, with the exception of two days, the tonic spasms predominated over the clonic, and, finally, as an example of the most surprising vital endurance, for the burns themselves were of such severity as apparently to preclude any but the most unfavorable prognosis. This patient noticed, as he began the second time to improve and to regain the power of swallowing, that hot liquids (as warm milk) taken by the mouth, had a greater tendency to bring on muscular twitchings than the same liquids in a cold state.

MEDICAL PROGRESS.

An Undescribed Disease of the Fallopian Tubes.—At the meeting of the Obstetrical Society of London, on November 7th, Mr. Lawson Tait contributed the following case. The patient, aged thirty-six, suffered from constant pelvic pain, aggravated during menstruation and after sexual intercourse, and was much emaciated and haggard. She had had much fruitless medical treatment. There were no physical signs of pelvic disease, except great tenderness. Mr. Tait made an exploratory incision, and found the fimbriæ of the tubes adherent by curious little nodules like millet-seeds. He therefore removed the uterine appendages, with the result of completely restoring the patient to health. The nodules had been examined by Mr. F. S. Eve, who reported that he could offer no opinion as to their origin or nature, but that they were neither cartilage nor bone. —*Med. Times and Gaz.*, Dec. 1, 1883.

Resection of the Œsophagus.—This operation was performed on September 23d, at the Ospitale S. Giovanni in Turin, for epithelioma.

The patient was a woman æt. 45. One year ago she began to have symptoms of stenosis of the œsophagus, and when she came to the hospital she was much emaciated from an inability to take food. The stenosis was so great that no œsophageal sound could be passed. Dr. Novaro diagnosticated epithelioma of the œsophagus, and performed Czerny's operation for resection. Having cut through the superficial tissues and exposed the œsophagus, a guide was passed into the mouth, and the seat and extent of the tumor easily made out. Having then separated the œsophagus from the trachea, and fixed it with silk stitches, he made a transverse resection about four-fifths of an inch below the lower limit of the tumor. The upper portion to be resected was two and four-fifths inches long, and involved a portion of the pharyngeal wall. It was also necessary to remove the posterior arytenoid muscles. Symptoms of asphyxia coming on, tracheotomy was performed. Through the opening in the gullet an œsophageal sound was slipped in, and after a week, was placed permanently through the mouth. A month after the operation there was an œsophageal fistula one inch and two-tenths long, for which a plastic operation was performed by Hüter's method for tracheal fistula. The tracheal tube and œsophageal sound have not been removed, and so far the operation has been successful.—*Gaz. degli Ospitali*, December 9, 1883.

Glycerine in Acute Fevers.—Professor Semmola calls attention to the use of glycerine as an aliment of economy in the treatment of grave acute febrile processes, and especially in typhoid fever. Alcoholic drinks, he says, have only a pretended antiseptic action, which has deceived many eminent practitioners. In his

opinion, alcohol produces a toxic action very much as do other antipyretics—veratrine, digitalis, carbolic acid, and salicylic acid—disproving the dangerous utopian ideas of some young physicians concerning the power of carbolic and salicylic acids, etc., to cure or abort typhoid fever.

As to alcohol, on account of its exciting action on the heart and cerebrum, and its disturbing action on the digestive organs, Semmola has entirely discontinued its regular and constant use as an aliment in grave febrile processes, reserving this agent for combating threatening heart failure.

Glycerine, on account of its chemical composition, long since appeared to Semmola as a substance which might replace alcohol in these fevers, and which would give the patients a greater resistance to the action of the fevers. He uses the following formula:

℞.—Glycerine, pure, ... f℥j.
Citric or tartaric acid, . . . ℥j.
Water, ... ad. f℥xvj.—M.
S.—f℥v–viij every hour.

This solution is well borne by the patient; but sometimes, on account of its acidity, Semmola often gives it at the hours for taking milk or beef-tea. In the rare cases in which the solution is unpleasant to the patient, he replaces the acid by a few drops of oil of anise.

The principal therapeutic effect, and the only one upon which Prof. Semmola insists, consists in the quantity of urea eliminated. From an accurate observation of twenty cases of typhoid fever, he concludes that the diminution during twenty-four hours may amount to so much as ℥vij, and as a rule it is from grs. xc–c. He has proved by experiment that the glycerine is the causative agent in this diminution.—*Journal de Méd. de Paris*, December 22, 1883.

CONVALLARIA, CONVALLARIN, AND CONVALLAMARIN.—PROF. DR. E. MARAGLIANO has recently made further researches as to the action of these preparations—the watery and alcoholic extract of convallaria, and of convallarin and convallamarin—on the pulse-curve, pulse and respiration, and blood-pressure, and draws the following conclusions from his experiments:

1. The intra-arterial pressure, measured by means of Basch's apparatus, is never lowered, but is sometimes raised as much as twenty-five or thirty millimetres.

2. The pulse-curve is never depressed in the ascending lines, but a marked rise is sometimes observed.

3. The frequency of the pulse and respiration is generally diminished.

Other experiments as to the action of the different preparations of convallaria gave the following results:

1. The urinary secretion was often increased, sometimes very markedly. Convallamarin acted more powerfully, while convallarin and the extracts were less active.

2. The frequency of the pulse and respiration was either increased or remained unchanged.

3. The blood-pressure was not lowered; sometimes it was raised.

4. The pulse-curve was generally unchanged, though sometimes the systolic lines were higher.

5. During the treatment with convallaria preparations, no bad effects nor intolerance was observed, except a few cases of diarrhœa. Of the diseases in which the good effects of the convallaria preparations were observed, heart diseases, of which thirteen cases were observed, occupy the first place. It acted well in valvular diseases, especially of the mitral orifice, with insufficient activity of the cardiac muscle. In nine of the thirteen cases the preparations were decidedly advantageous. They increased the amount of urine, and regulated the heart's action. In many cases convallaria is preferable to digitalis. In four cases in which it failed, digitalis also failed. Convallamarin also acts most powerfully in cardiac disease.

The convallaria preparations do not give the good results in pleurisy with sero-fibrinous exudation which have been attributed to them. They are superior to digitalis, in that they produce none of the unpleasant effects of digitalis, and have not its cumulative action.—*Centralbl. f. d. med. Wissensch.*, Oct. 27, 1883.

CASTRATION IN THE FEMALE.—TAUFFER is very favorably disposed to this operation. After having reported twelve cases, he concludes:

1. With necessary precautions this operation is not very dangerous; the mortality being only ten per cent.

2. It should be done under the spray; the abdomen should be closed; drainage is only exceptionally necessary.

3. The fact that the woman is near the menopause is no contraindication, for we cannot positively say when the menses will cease.

4. It is impossible to give any rule for operating, such as Hegar's, that the ovaries should be accessible to palpation.

5. Double ovariotomy should be performed, especially when a single ovary is diseased, except in the rare cases where one of the organs must be preserved.

6. The Fallopian tubes should be removed if they are diseased in any way.

7. Hystero-epilepsy is curable by castration; and the group of symptoms known as hysteria is often attributable to ovarian disease.

8. The question as to the effect of the ligature of the large supplying vessels on uterine fibromyomata needs further consideration.

9. As to prognosis, it is probable that the menopause will not be delayed after the operation except in the cases in which inflammation has involved the neighboring organs. These inflammations retard the menopause.

10. It is desirable that the cases should be classified according to the plan suggested by Hegar.—*Ann. de Gynéc.*, December, 1883.

HYDATID OF BASE OF SKULL.—An interesting case of an obviously incomplete character was brought under the notice of the members of the Société Médicale des Hôpitaux, by M. Bucquoy, on November 23d. The subject of the disease exhibited well-marked atrophy with paralysis of the facial muscles, internal squint and anæsthesia, all on the left side of the face. There was no history of syphilis or of any other morbid antecedent. The malady had set in three years before with headache, and a tumor had made its appearance at the angle of the jaw in the beginning of the present year. Many hydatid vesicles had been ejected from the mouth. The tumor was opened by M. Bucquoy by an incision, and much

purulent fluid let out mixed with hydatid vesicles. The patient still had a fistula at the angle of the jaw (the site of the incision), from which hydatid vesicles continued to be discharged at intervals. The paralysis was persistent. M. Bucquoy thinks that the cyst involved the sphenoid bone and projected thence into the pharynx. The case itself excited some discussion. M. Dujardin-Beaumetz asked whether the hypothesis that hydatids still existed in the brain was excluded. Owing to the spastic state of the masticatory muscles, it appears that a careful examination of the pharynx was not possible. Whatever the probabilities, it is obvious that nothing short of actual inspection of all the parts concerned could be expected to clear up every point of interest in the case.—*Lancet*, December 8, 1883.

Quebracho, Aspidospermin, and Quebrachin.—Maragliano gives the following as the results of his experiments on the action of these substances:

1. The alcoholic extract of quebracho, quebrachin, and aspidospermin have a diminishing action on the frequency of respiration, aspidospermin being the least powerful.

2. These substances act only when the increased frequency of respiration depends, not on affections of organic or mechanical nature, but on functional disturbances. In acute and chronic cardiac and respiratory diseases, they are of value; but they have no marked action on the frequency of respiration if this oversteps the physiological limits.

3. These substances, quebrachin and aspidospermin especially, have a decided influence on the pulse-rate, which may be diminished so much as twenty per minute.

4. The action of quebrachin and aspidospermin on the intra-arterial blood-pressure, with Basch's sphygmomanometer, is entirely negative.

5. The action of these substances, especially quebrachin and aspidospermin, is very quickly manifested: if given per orem, in from thirty to forty minutes: if hypodermatically, in from five to ten minutes. In giving the alcoholic extract no symptoms of intolerance have been observed. Sulphate and hydrochlorate of quebrachin and aspidospermin were administered in pills containing gr. ¼–jss each, the daily dose being gr. iij¾–xv.

Large doses cause gastric troubles. A medium dose is gr. vj–vijss taken internally during the day. For hypodermatic injection, quebrachin and sulphate of aspidospermin should be used, gr. ¾–jss at each injection. When this amount is completely dissolved in water it causes no local or general unpleasant results, and a diminution of the respiration- and pulse-rate is soon observed. For asthmatic attacks, quebrachin, used hypodermatically, is to be preferred; but for methodical treatment, the alcoholic extract is preferable. These preparations, then, are important additions to the physician's armamentarium. The best preparations are manufactured by Merck, of Darmstadt.—*Centralbl. f. d. med. Wissensch.*, October 27, 1883.

Trephining for Syphilitic Exostosis.—M. Perrin reported this case to the Société de Chirurgie in June, 1883. The history is as follows: In 1854 a spent ball struck him on the forehead. This was followed by obstinate cephalalgia. In 1865 he contracted syphilis, and was treated with mercury; the cephalalgia persisted. In 1869, the pains in the head became more violent, and Nélaton removed five sequestra from the frontal bone, there having been a fistulous tract since 1854. In 1870, the cephalalgia reappeared, and was relieved by specific treatment. In 1875, he became very excitable, and lost his memory; had difficulty in articulating words, and there was incomplete facial paralysis of theleft side.

He entered Val-de-Grâce, when M. Perrin found a large projection in the frontal bone, having a fissure in the centre into which a stylet could be introduced, and from which pus flowed. The stylet could be carried towards the external orbital suture, and in a short time pus escaped through the nose. The symptoms became aggravated, and he was put on mercury and iodide of potassium.

M. Perrin then trephined the frontal, and found that the bone was less than three-fifths of an inch thick. Alcohol dressings were applied, and the wound rapidly healed. A month afterwards, the paralysis disappeared, and articulation was easy. A few months later, the patient was put on iodide of potassium in large doses, and mercurial frictions, since which time the health has been excellent.—*Ann. de Dermat. et Syphil.*, Nov. 1883.

Globulinuria in Acute Bright's Disease.—A case of acute nephritis is reported by Werner, of Heidelberg, as occurring in Prof. Dusch's clinic, which is probably unique. It was that of a child, aged five years and a half, who developed symptoms of the disease after exposure to wet five days before his admission into the hospital. There was only a little œdema of the eyelids, together with signs of diffuse bronchial catarrh on admission, but general dropsy rapidly supervened, and death occurred from suppression of urine five days afterwards. What renders the case remarkable was that the urine only contained globulin, and never serum-albumen, although repeatedly examined, amongst others by Kühne.* The characters of the urine were its high color, cloudiness, and moderate deposit, but no blood. Slight turbidity appeared on boiling with nitric acid, and also with acetic acid, clearing up, on excess; and after supersaturation with magnesian sulphate no precipitate was obtained in the filtrate on the addition of nitric acid. Fatty epithelial and granular casts were found. The writer points out that hitherto globulin has never been met with in urine unless in company with serum-albumen; and quotes the statement of Senator to the effect that the quantity of globulin is most in the amyloid form of renal disease, next most abundant in acute nephritis, and least in the chronic diffuse form, although much albuminuria may be present. The same author also suggested that the globulin may be derived not only from the blood, but also from the morbid changes undergone by the renal epithelium, and Herr Werner thinks his case proves the possibility of its being solely derived from the latter source. He interprets his case, then, as one in which the renal epithelium was principally affected, which speedily and widely fell into a necrotic condition, as evidenced by the tube-casts, and that this necrotic cell protoplasm was the source of the globulin. The idea is, to say the least, ingenious; and it is most unfortunate that no post-mortem examination was obtainable. It should be added that the child had previously been in good health, and had never had scarlet fever.—*Lancet*, December 8, 1883.

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THE ELECTRIC LIGHT AND GAS-LIGHT COMPARED.

THE introduction of the electric light has not only supplied a superior means of artificial illumination, but it has stirred up a competition that has resulted in great improvements in other methods of lighting. It has also directed attention to the study of the connection between lighting and hygiene, which will lead to important results.

As the introduction of gas gave an impetus to the improvement of oil lamps, so has the new illuminant—electricity, by the competition it has aroused, brought out improvements in the methods of gas-lighting which are altogether unprecedented. It is said that there is as great a difference between the light given by gas-burners recently invented and that of those which were in use ten or fifteen years ago, as now exists between the electric light and the present means of illumination by gas. And it is not too much to expect that, with improved contrivances for the most perfect combustion, and for conveying its waste products to the external air, along with means for the utilization of the temperature of combustion for ventilating purposes, and the application of the incandescent principle, gas-light will be able to compete on favorable terms, even from a hygienic standpoint, with the electric light for indoor illumination. At present, however, the incandescent light *in vacuo* is hygienically beyond comparison with the ordinary gas-light.

The heat produced by the resistance of the delicate filament of carbon used in this form of the electric light is hardly appreciable, and is therefore not sufficient to have any effect upon the gases of the atmosphere. The light being *in vacuo*, there can be no possible vitiation of the air. Another advantage is its almost perfect accordance with the laws of visual hygiene, in that it permits of the selection of the different colors the same as by daylight.

The source of light in the new illuminant depends on the "energy of current electricity." With the older illuminants, it depends on the "energy of chemical affinity." Coal-gas has a great affinity for oxygen, and will ignite in its presence if the temperature be high enough. Its combustion cannot take place without the production of considerable heat, and the abstraction from the atmosphere of a large amount of oxygen. Moreover, the process is attended with the production of deleterious substances, the result of chemical combination.

The development of heat by the combustion of ordinary illuminating gas is not so much an objection, as this may be utilized for ventilating purposes; but the abstraction from the air of a large proportion of oxygen—the life-supporting element of the atmosphere—and the production of deleterious compounds, are the features which cause gas-light, as ordinarily used, to be injurious to health. According to Mr. Slater, every cubic foot of ordinary coal-gas, giving fifteen candles for five cubic feet per hour, requires for its perfect combustion 1.17 cubic feet of oxygen, so that in a room lighted for two hours by three good burners, the gas would require 35.1 cubic feet of oxygen.

The products of coal-gas combustion are mainly aqueous vapor, carbon monoxide, carbon dioxide, and sulphuric acid. Sulphuric acid is one of the products of oxidation of the carbon disulphide, traces of which are not uncommonly found in ordinary gas. This constituent makes its presence known by the damage it causes to plate, pictures, etc. When gas is imperfectly oxidized, a considerable quantity of carbonic oxide escapes into the air and forms a dangerous impurity. Carbon dioxide is the chief constituent of the products of gaseous combustion. The amount of this gas in normal air is, on an average, 0.04 per cent.; it frequently varies from this mean. Now it is evident that this standard cannot be maintained in a confined space where the combustion of gas takes place, unless special means are used for the removal of the products of such combustion and the fresh supply of pure air.

The freedom of the incandescent electric light from these serious disadvantages gives it a superiority over any means of artificial illumination hitherto invented, and causes it to rank as the hygienic light of the future. The convenience of gas as an illuminant is a strong influence in its favor, but this claim cannot be expected to be long withheld from its new rival. Attention will then, more than ever, be directed to the perfection of appliances for the

entire removal of the harmful products of combustion, the supply of fresh air to counterbalance the loss of oxygen, and to the improvement of the quality of the light by some such invention as the Siemens, Grimston, or Lewis incandescent gas-burner, so as to avoid the disadvantages of the system of coal-gas illumination, and at the same time to afford the maximum illuminating power with a quality every way satisfactory.

With regard to the electric arc lights, it is stated that, unless enclosed in air-tight globes, they produce nitrogen oxides from a rearrangement of the gaseous constituents of the atmosphere thrqugh the intense heat of the voltaic arc. Carbon dioxide is also said to be produced in the same way. The varying densities of the light from the heterogeneous character of the carbons cause muscular fatigue of the eyes and also render retinal images indistinct. From a sanitary standpoint this light cannot be said to be so satisfactory for indoor illumination as the incandescent light *in vacuo*.

THE PRACTICAL ASPECT OF THE BACILLUS TUBERCULOSIS.

The article by Prof. Flint, Sr., "On the Pathological and Practical Relations of the Doctrine of the Bacillus Tuberculosis," published in our last issue, is worthy of careful perusal by all readers. Dr. Flint's high position in connection with American medicine, as well as his long association with pulmonary diseases, make his opinion more than commonly valuable on this important subject.

Dr. Flint unequivocally accepts the doctrine that a micro-organism is one of the factors in the production of tubercular phthisis, that it is essential, and that there is no tubercle without it; while, on the other hand, he does not consider it alone sufficient to produce the disease. With it must be associated the second factor, predisposition, either hereditary or acquired. Whence it follows, too, that tuberculosis is an infectious disease in the sense in which this term is accepted to-day, viz., a disease dependent on special causative agents which, under favorable circumstances, are capable of multiplying indefinitely, either within or without the body. In that the bacillus requires a soil favorable to its development, a condition furnished by the predisposition, tuberculosis is not different from other infectious diseases.

Another conclusion accepted by Dr. Flint is that pulmonary phthisis, which we now again regard as a synonym for pulmonary tuberculosis, is primarily a local disease, the initial morbid process taking place in the lungs and being due to the presence of the parasite. The fact that no other infectious disease is local, even primarily, in the sense that tuberculosis is local, seems, to Dr. Flint, in no way to militate against its infectiousness. We do not know that it ought to be considered as doing so, but the fact itself should not be overlooked.

That clinical statistics fail to show that tuberculosis in man is contagious, is owing to the fact that in most cases the concurrent coöperating conditions embraced under the term predisposition are wanting. This view is further sustained by the fact that different animals differ widely in the susceptibility to tubercle inoculation, cats and dogs possessing comparative immunity, as compared with rabbits.

In the diagnosis of tubercular phthisis, Dr. Flint assigns the bacillus a high value, believing that if repeated, sufficiently careful examinations show its presence, phthisis is present, while its absence excludes the possibility of the disease.

The application of these new doctrines to the prevention and cure of phthisis, is admitted to have been thus far without practical results. The preventive measures now available are those available before the bacillus was known, and no measures have been discovered which can destroy the parasite without destroying the patient.

We hope the publication of Dr. Flint's paper will have the effect of attracting the attention of clinicians on this side of the Atlantic to this important subject. For, as yet, they have done very little for us in this direction. The profession in this country are sometimes even too ready to avail themselves of practical suggestions in the direction either of operations or therapeutics, involving little thought and labor, but they are still too unwilling to devote the time and labor required to work out such results. Dr. Flint's evident painstaking care in the preparation of his paper, notwithstanding his numerous engagements at this season, is certainly an example to us.

SHORTENING THE DURATION OF PREGNANCY.

Contributions to our medical literature are not unseldom made with the design of showing how the first stage of natural labor can be shortened, and the method almost invariably advised is dilating the os uteri by the fingers. It is true this method has been strongly condemned by many great obstetricians from Baudelocque to Barnes, the latter not many years ago speaking of it as "old and bad;" nevertheless it undergoes frequent revivals, its advocates presenting it if not as a new, at least as a very useful interference or assistance in normal labor. Undoubtedly any means that will lessen the suffering and avert the perils of childbirth ought to be received with favor, and while we do not propose to discuss this method, or any other having directly its design, at present, we wish to consider a more

important subject, viz., lessening the term of human pregnancy.

It must strike the thoughtful as strange that while science has done so much to relieve feathered domestic animals of the weariness, the emaciation, and the exhaustion of a few weeks' incubation, accomplishing by artificial heat in a day or two that which the clucking mother cannot do in less than three weeks, nothing has been done to shorten the long period of nine months during which the human mother carries on the internal incubation of her egg. Certainly every one will admit that it is desirable to relieve women in pregnancy of all the inconveniences and dangers their state brings. Now it must be conceded that usually these inconveniences and dangers are greatest in the last two months; and, like the western farmer who, observing that the squirrels only ate the corn in the outside rows, concluded he could save his field from their ravages by having no outside rows, so do not let the pregnancy have any last two months in which such dire evils may come.

It must also be obvious to the observant practitioner that childbearing is not the simple and safe process it was when the race was young. It is quite probable that in the intellectual development of mankind the head is bigger than heads once were, the maternal passage is not large enough for the passenger, and so uterine and vulvar orifices tear instead of stretch as they did in the good old times. Whether these lacerations, which furnish so important a field for the busy skill of those most accomplished and polished members of the medical fraternity known as gynecologists, are thus explained, or whether they result from an inferior stuff, a sort of somatic shoddy, put into woman's sexual apparatus, deficient in strength and elasticity, or from some other cause, certainly it is very sad to think that a woman cannot have a baby without subsequently in many cases having to be put in a repair-shop for a few weeks, or even months. No wonder many women shrink from childbearing, avoid it *per fas et nefas*, when babies cost so much. Formerly a midwife did all the work, and her fee was a trifle; but now the obstetrician attends in the labor, and after the ordinary period of puerperal convalescence, in one case of five or ten, is succeeded by the gynecologist. Again, adopting the wise apothegm of the late President Lincoln, a small debt is more easily paid than a large debt, will not a small baby be born sooner than a large one, and thus not only the first, but also the second stage of labor be shortened?

We think by these arguments we have clearly shown the desirability of shortening the duration of pregnancy, and the great blessings such abridgment would give.

It remains for us to consider some of the means that may be used for the accomplishment of this end. Why pregnancy ends at nine months is still an unanswered question, but we hope that the suggestions we make may lead to the final solution, for by trying various ways to bring on labor, we will find some one which is always certain, safest, and best, and, therefore, that may be accepted as Nature's way. Let us suppose, for example, that fatty degeneration of the decidua renders the ovum a foreign body, and thus the excitant of uterine contractions. Accepting this theory, we may give the woman arsenic or other steatogenous medicine, beginning a few weeks before we wish labor to occur. Or again, the Tyler Smith theory, that labor comes on from ovarian influence, is quite as probable as the one just mentioned; here our task is very simple, and its result ought to be certain: we depend altogether upon faradization of the ovaries, and if we continue this daily for a sufficient length of time, labor will surely come on. But possibly the exciting cause of labor is the excessive distention of the uterus. In these days, when resection of the stomach and pericardial paracentesis are so successfully done, there ought to be no hesitation as to introducing a canula into the fœtal sac, and pumping in a sufficient quantity of warm water to excite uterine action; it is possible that labor could be thus induced within a few hours, and as the most important means of this induction is a syringe, the peculiar fitness of Uncle Toby's question, "Are children born with a squirt?" would be plain. And thus we might show that there is not a single theory of the determining cause of labor which cannot be illustrated by artificial means.

But some philoprogenitive friend may ask whether these babies thus coming at seven months will not be so feeble that they cannot live. Most assuredly they can and will live, for that admirable invention, the *couveuse*, which, of course, is not to be confounded with a caboose, though each is remarkable for its warmth, is just adapted to such infants. Read Auvard's paper in the October number of the *Archives of Tocologie*, an abstract of which appeared in last week's issue of THE NEWS, and it will be seen that babies considerably under seven months get on very well by the help of the *couveuse*. Apart from any modern facts showing that seven months' babies do live and grow to healthy maturity, we have, in the nineteenth book of the *Iliad*, the case of Sthenelus's wife, "scarce seven moons gone," lacking, therefore, somewhat less than three lunar months the completion of pregnancy, who gave birth to a healthy son, and that son was especially favored according to Jupiter's promise.

Of course, we do not expect our suggestion as to shortening the period of pregnancy to be at

once accepted; an important idea of this kind can only gradually make its way. But when the practice is adopted, let there be no dispute as to with whom and when it originated. Alas! we do not know who first practised digital dilatation for the shortening of the first stage of labor any more than we know what song the Syrens sang, but all must know the importance of the suggestion now made by THE NEWS.

EMBOLISM OF THE SUPERIOR MESENTERIC ARTERY—PERFORATION OF THE INTESTINE.

AN interesting case of this rare accident is communicated by CONTI to the *Gazetta degli Ospitali*, 1883, No. 57. A man sixty-five years old was admitted to hospital with cerebro-spinal meningitis. Recovering from this disease, he remained two years on account of general atheroma of the blood-vessels. On January 19th, he became suddenly ill and died with symptoms of acute peritonitis. The autopsy revealed thickening of the pia mater of the convexity, moderate hypertrophy of the left heart, extensive atheromatous endarteritis, with numerous lateral thrombi of the ascending and descending aorta. The peritoneum was dotted with numerous hemorrhages, and in the middle third of the transverse colon was found a round opening, 0.4 of an inch in diameter, surrounded by a hemorrhagic areola. In the right half of the transverse colon were two larger subserous hemorrhages, while the mucous membrane of the colon and small intestine was œdematous. The entire large intestine was dilated, the muscular coat was hypertrophied in its lower part, and just above the anus was a cicatricial stricture covered with numerous polypoid vegetations and hemorrhoidal nodules. The entire superior mesenteric artery was occupied by a gray coagulum. The kidneys were granular.

It would appear from this that the superior mesenteric is a terminal artery and that embolism of it produces hemorrhagic infarct. In this case necrosis of the intestinal wall and perforation of the gut were superadded to the lesions.

"TERRIBLE TRACTORATION."

APROPOS of metallotherapy, we note that Perkins's tractors, at one time the most successful imposture then current, accomplished results not wholly explicable by the influence of the imagination. The effects of metals, or metallotherapy, are now generally acknowledged, and by those most competent to form a correct opinion. Perkins's tractors must have had curative effects, also, composed as they were of several metals. Beside the action of the metals, the mystical powers ascribed to the instrument were not without effect on the imagination. The wooden tractors used by Dr. Haygarth, of Bath, England, no doubt, accomplished as much as the genuine tractors in the treatment of affections having their seat in a disordered imagination. So, in our day, wooden images of genuine coins may have an effect not unlike that produced by the real metals. All imitations fall short, however, of the curative actions effected by the genuine tractors and metals.

In a former issue we called the attention of our readers to the Perkins's tractors as the real origin of that system of therapeutics now known as metallotherapy, or Burqism. The tractors excited an immense enthusiasm in England, and a Perkinsan Institute was founded in London for the benefit of the poor. The method was strongly opposed by the medical profession, ridiculed in the most unsparing manner, and denounced as arrant imposture. Haygarth's imitation tractors were asserted to produce the same effects as the genuine. At this juncture a powerful advocate of the tractors appeared in London under the title "Terrible Tractoration."[1] In this Hudibrastic poem all the medical novelties of the day are held up to ridicule, and the tractors defended. As a specimen of Dr. Caustic's wit we quote the following stanza:

> "Pursue the steps the learned sage hath,
> The most redoubted Doctor Haygarth,
> Who erst o'er Perkins's sconce at Bath,
> Broke a whole gallypot of wrath!!"

Terrible Tractoration was written by Thomas Green Fessenden, of Walpole, New Hampshire. He graduated at Dartmouth in 1796, was educated as a lawyer, but his tastes were literary, and he subsequently became a writer on agricultural matters. The poem above referred to betrays an extensive acquaintance with medical notions of the time. It was first published in England, where its author was engaged at the time, and an American edition appeared in 1804, in New York.

LUXATIONS OCCURRING DURING THE COURSE OF GRAVE FEVERS.

APROPOS of our editorial comments upon pathological luxations in the issue of THE NEWS for January 12th, our attention has been called to the Toner Lecture on the Surgical Complications and Sequels of the Continued Fevers, delivered by DR. W. W. KEEN, in 1877, in which that gentleman collected a number of examples of similar lesions confirmatory of the conclusions arrived at by Verneuil.

Of the 27 dislocations of the hip, 21 were spontaneous, and 6 were due to slight traumatism. In

[1] Terrible Tractoration!! A poetical petition against Galvanizing Trumpery and the Perkinistic Institution, in Four Cantos. Most respectfully addressed to the Royal College of Physicians, by Christopher Caustic, M.D., LL.D., ASS, etc.

all of the cases it is probable that the head of the femur rested upon the dorsum of the ilium, and in three the lesion was double. In 15 the accident occurred during the course of typhoid fever, and in 7 during the course of typhus fever, and 21, out of the 23 in which the age is noted, were under twenty years. In the remainder, the dislocation occurred twice at the shoulder, and once at the knee.

SOCIETY PROCEEDINGS.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 17, 1884.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D., IN THE CHAIR.

DR. R. F. WEIR read a paper entitled

HOW ANTISEPTICS ARE USED IN THE NEW YORK HOSPITAL—A DEMONSTRATION.

After devoting some remarks to the antiseptics of the past and the manner of their use, he went on to say that one serious objection to both carbolic acid and iodoform was their highly poisonous character, and that medical literature now teemed with cases of fatal results attending their use. What quantity of carbolic acid could be employed with safety had not been definitely determined, but it had been demonstrated that it was dangerous to use more than forty-five grains of iodoform about a wound. Not quite two years ago (in March, 1882), Dr. Weir said he first began to employ bichloride of mercury as an antiseptic. All that he knew about the agent in this connection was derived from Delacroix's paper, and he at first used it in a very imperfect manner. After the researches of Kimmel, Koch, and others had been published, however, a clear idea of its powers and applicability could be obtained. It was now commonly employed in the proportions of one part to one thousand and one to two thousand of water, and it was a great boon to the surgeon to have a germicide that was both safe and cheap as well as efficient. Up to within a week he had believed that the solution of the bichloride was a durable compound, and that the acme of a surgical dressing had at last been reached. During the last few days, however, he had ascertained that it was not so durable as he had supposed; having determined to test this special point before appearing before the Academy on the present occasion. He had previously noticed that the solution when kept for some time became milky in appearance; showing that calomel had been formed at the expense of the bichloride. He had not, however, supposed that the same change took place in surgical dressings after having been put on; but he now found that after they had been in position from one to two weeks, the application to them of lime-water showed the black spot characteristic of calomel under this test, instead of the reddish tint yielded by bichloride of mercury. As soon as he discovered this, he wrote to Prof. Gibbs, of Harvard, and he had just received a letter from the latter in which he said that he thought that probably by the addition of a small quantity of common salt (five parts to a thousand) the solution might be rendered permanent, or at least more durable. At the same time he promised to make further investigations in regard to the matter.

The bichloride solution was used in various ways in the New York Hospital. In the dressing of wounds gauze or cheese-cloth was employed which had been impregnated with it, and the material used in this hospital, which cost only four cents a yard, was manufactured for it in such a way as to contain no sizing. Where the sizing existed it was necessary to get rid of it before using the gauze; which could be done by washing it with a weak solution of muriatic acid. The standard solution used at the hospital, was made up of 20 parts of bichloride of mercury, 44,480 parts of water, and 500 parts of glycerine, which is a one-quarter per cent. solution. In certain cases a stronger solution (one to one thousand) was employed. The advantage of the glycerine was that it prevented the dressing from entirely drying after it had been applied, as it had been found that the gauze became a little weakened by completely drying. In addition to gauze, various other substances were used for dressing, such as cotton, jute, peat, wood-pulp, and moss, and Dr. Weir exhibited examples of these in succession.

Peat, he said, was the most absorbent, taking up sixteen and a half times its weight of water, and also the cheapest, costing six cents a pound. Two varieties, the dark and the light-colored, were used, and sometimes these were mixed together. All that had thus far been employed had been imported from North Germany, but he had no doubt that it could easily be obtained in this country. Wood-pulp, which was used largely in Germany for manufacturing paper, was slightly more expensive, costing eight cents a pound, but it absorbed pretty nearly as much water, and it had the decided advantage over peat of being perfectly clean. But of all the substances which he had seen used in the European hospitals in a recent trip abroad, nothing pleased him so much as the bleached and pressed jute, finely carded, which differed very greatly from the common jute which most were familiar with. This costs forty cents a pound, but there was a good deal more bulk of it to the pound than of the other substances mentioned, and it was so soft and pleasant to the touch that it seemed to him the ideal surgical dressing. It did not, however, absorb as much water as the others. It could be obtained of M. Lienau, 2 Jones's Lane, New York, by whom it was imported. Another substance which served a very good purpose, and which could be found in any quantity here, was the ordinary moss of the woods. It would absorb from four to six parts of water, and it cost almost nothing. In the few instances in which he had employed it, Dr. Weir said it had answered very well.

In operations, he was accustomed to wash first the parts adjacent to the seat of trouble with a solution of two ounces of turpentine—which had been proved to be a good antiseptic—in a pint of alcohol. This was sometimes done the day before, and sometimes on the day of, the operation. Being a good solvent for fatty substances, it was very useful in removing any accretions from discharges.

In performing amputations, he now made use of a protector (a rubber cloth with a hole in it, through which the limb to be amputated was slipped), which he had seen employed in the hospitals in Germany. There

the surgeons were in the habit of keeping the part that was being operated upon constantly irrigated in a very free manner with antiseptic fluid, and such a device was necessary for the protection of the rest of the patient's body. In regard to the spray, he remarked incidentally that he had abandoned it, except in operations upon the joints and in the thoracic and abdominal cavities, in which he still continued to use it. He then digressed for a moment, to mention the antiseptic knives which Esmarch had devised. They are made of one piece of steel, so as to afford no lodgement for septic germs, which might possibly adhere to ordinary knives. One objection to them was that the handles were liable to become quite slippery if wet with blood, and in order to obviate this, Tiemann, of New York, had made some knives of which the handles were of baked rubber, but contained no crevices whatever. He also exhibited a variety of the latest hæmostatic forceps now in use, devised by Spencer Wells, Tait, Esmarch, and others, and said that he though the best was that of Hahn, of Berlin.

The amputation having been performed, all hemorrhage was to be arrested as promptly as possible; though if the Esmarch bandage had been properly applied, there would probably be none. For the tying of vessels, he had now given up the carbolized catgut ligature of Lister, which, while it was quite strong, was very slippery, on account of the olive oil used in the carbolic acid solution in which it was dipped. It had received a very severe blow, also, when Koch declared that carbolic acid when mixed with olive oil lost all its antiseptic qualities. Lister's chromic acid ligature was not open to the same objections; but the trouble with this was that it lasted too long, and thus constituted a foreign body in the wound. He therefore employed a catgut ligature prepared with bichloride of mercury solution, which, when dry, was devoid of slipperiness, and which was also sufficiently strong. It was first dipped in a solution of the strength of 1 to 100 for ten minutes, and then put in one of the strength of 1 to 1000 where it was allowed to remain for twelve hours; after which it was wound on a bobbin, and placed in 95 per cent. alcohol. An even better ligature was that which was prepared by dipping first in oil of juniper and then in alcohol, for the reason that it was not so brittle; and it was still better if it was kept in oil of juniper.

The wound was closed with the continued, instead of the interrupted suture (catgut being employed for the purpose); but an opening was always left at each end for the insertion of a drainage-tube. The black rubber tube was that which was commonly employed; but it was somewhat objectionable, because if left in position for longer than from three to five days, it caused an open tract, which required a considerable time to heal up. On the other hand, if it was removed early, it necessitated the renewing of the whole dressing, which was often very undesirable. To meet these objections, decalcified bone tubes had been devised by the German surgeons, and, as these become at length entirely dissolved, they answered a very good purpose. After the drainage-tubes had been passed in, the wound was flushed with corrosive sublimate solution until the latter came away quite clear, and compresses of antiseptic gauze were then fastened on the wound with sufficient tightness to keep up a moderate amount of pressure. Over the gauze was placed the absorbent cushion, the material composing which, whatever substance might be selected, was tacked in, so as to keep it of uniform thickness; and around the whole was wound the crinoline bandage. The stump, as dressed with the amputation cushion, presented somewhat the shape of a swollen turnip.

In many instances, an amputation was expected to heal under one or two dressings; and it was an understood fact that a cure was invariably more or less hastened by this manner of dressing. All this, of course, presupposed perfect cleanliness; and in the opinion of some authorities, it was in this point that the real secret of the success of antiseptic surgery lay. Tait, who had achieved such extraordinary success in abdominal surgery, was the apostle of cleanliness, and had discarded Listerism. His operating-room was the cleanest place that Dr. Weir had ever seen, and his instruments were all kept under water. He was particularly struck with the care that was taken with the sponges used, as he believed that more risks came from bad sponges than from any other cause. They were first thoroughly soaked with pure water, and then with a solution of one pound of soda to four gallons of water; after which they were soaked in pure water again, and then treated with carbolic acid, 1 to 20. In his wards, at the time that Dr. Weir visited him, were a number of cases of ovariotomy, hysterectomy, and other serious operations, and they were all doing perfectly well. In some there was a considerable increase of temperature, but it did not appear to occasion any apprehension on the part of Mr. Tait. The only thing of which there was to complain were one or two stitch-hole abscesses, such as were not observed in the cases of surgeons who practised the antiseptic method. Keith, of Edinburgh, rejected only the use of the spray in his operations, and Dr. Weir remarked incidentally that some surgeons, instead of the spray, made use, during their operations, of a boro-salicylic acid solution, with which they kept the parts constantly bathed.

In regard to sponges, it was very important to know how to prepare them for use, and to cleanse them thoroughly afterward, in case they were to be used again. At the present time, however, they could be purchased so cheaply that it was much better to throw them away after using them once. In the New York Hospital, the sponges are first hammered, so as to get the sand out of them, and then put in warm water. If the water was too hot, it would cause deterioration. They were then left in a 1 to 1000 solution of permanganate of potassa for twenty-four hours, and after having then been rinsed out in warm water, they were treated with a solution of 1 part of sulphite of sodium to 100 of water; one-fifth part of a solution of chlorhydric or oxalic acid (eight to one hundred) having first been added to the water. They are stirred up with a stick for a few minutes, until they whiten; if left longer, they will become friable. They are next washed out and placed in running water for some time, and finally in a solution of carbolic acid, 1 to 20, or bichloride of mercury, 1 to 1000. If the operation in which they were employed was about the abdomen, vagina, or rectum, they were thrown away immediately; but otherwise they were kept, and cleansed by the same process as before.

Dr. Weir then exhibited a splint, for compound fractures and other injuries of the leg, which was composed

of enamelled tin, so that the discharges from one patient could not possibly affect another using the splint afterwards.

In conclusion, he gave some statistics showing the great improvement in mortality since antiseptic surgery has come into vogue. Before antiseptics were employed the mortality from compound fractures in St. Luke's and the Roosevelt Hospitals was thirty-three per cent.; in the old New York, sixty per cent.; and in the Boston City Hospital, forty-one per cent. In Dr. Weir's hands, when the open method was used in the treatment of compound fractures, the mortality was twenty-six per cent., but since he had used antiseptics it had been only six per cent., and some other surgeons had achieved even more favorable results. He then gave some figures showing the same happy results in amputations performed after the antiseptic method, and brought his remarks to an end by saying that on account of the vast saving of human life by the carrying out of the principles which he first enunciated, the name of Joseph Lister deserved to be placed above all in the present century, not even excepting the discoverer of anæsthesia.

Dr. Post, in opening the discussion, said that he was fully convinced of the very great value of antiseptics in surgery, although he was perhaps not altogether prepared to adopt all the minute details that had been recommended. In unimportant cases, where there was little danger, he thought this would only cause unnecessary trouble, and believed that the securing of cleanliness and drainage would be sufficient. There was one antiseptic agent to which Dr. Weir had not alluded, but which he had found very efficient, and that was subnitrate of bismuth. When first recommended in this connection it was employed in the form of a solution; but recently he had used it in the dry powder, and he had found that wounds sprinkled with it did remarkably well.

Dr. Bryant said that he had watched the progress of antiseptics with a great degree of interest ever since 1868. While an interne of Bellevue Hospital, from the fall of 1869 to the spring of 1871, he had treated some twelve cases of compound fracture, and had thoroughly injected the wounds with carbolic acid solution of the strength of one to eighty, which was the strongest then employed; the ordinary solution used in the house being one to one hundred and twenty. The whole limb was also washed with the carbolic solution, and it was then surrounded with oakum and placed in a plaster-of-Paris splint. Of the twelve cases all but two recovered, and one of these was an exceedingly bad one. Since leaving the hospital, he had habitually used the ordinary Lister dressing, and recently in the place of carbolic acid had used bichloride of mercury solution in the strength of one to two thousand, in connection with iodoform, Lister gauze, peat, etc. He always got good results with the antiseptic treatment unless, as occasionally happened, there was some defect in applying the dressings. The methods in vogue at the present day could hardly be attributed to any one individual, though to Lister more credit was due than to any other. As a Bellevue surgeon, he could testify to the extraordinary benefits of antiseptics; and he then proceeded to mention some cases illustrating their advantages which had lately been under his care in the wards of that institution.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, December 19, 1883.

The President, Wm. M. Welch, M.D., in the Chair.

Dr. Roberts Bartholow read a paper entitled

WHAT IS MEANT BY NERVOUS PROSTRATION?

The popular conception of the condition now known as "nervous prostration," he said, is a state of debility in which nervous derangements predominate. A man actively engaged in business or in public life presently finds himself unequal to his daily tasks: he suffers odd sensations in his head; his digestion is disordered; he is weak; wakefulness, mental depression, and a thousand and one new sensations of strange character and fearful portent are superadded. The unfortunate subject of these ills now recoils from his work, gives himself up to the consideration of his symptoms, and relaxes his hold on the interests and occupations of his life. All the world declares that he has "nervous prostration," and this explanation satisfies. Physicians say "neurasthenia" or "hypochondria," according to their habits of mind or to their training. Sometimes this condition is called the "American Disease."

The term *neurasthenia*, advocated by the late Dr. Beard, is by no means of recent origin. The corresponding French word, used in the same sense as we now employ it, has been a stock-word of French neurological medicine for fifty years. Under the terms spinal irritation, hysteria, hypochondriasis, the nervous state, etc., symptoms of the same character as those now included in the word neurasthenia have been described. Besides the general state, similar derangements of functions of particular organs have been separately considered, as palpitation of the heart, headache, flatulence, impotence, etc. In the word neurasthenia—popularly, nervous prostration—the whole morbid complexus is included. The question I have to consider is whether this is a real, a substantive disorder. Are the notions now generally entertained about it founded on a true conception of the condition?

I need not enlarge on the importance of a correct understanding of a morbid state, which is supposed to be due to the conditions of modern, especially of American life. Dr. Bartholow then narrated the clinical history of two cases, representatives of the two types of neurasthenia, respectively the *congestive* and the *anæmic* varieties. The latter are greatly more numerous, but the former are not uncommon.

The causes of neurasthenia are complex; the effects are not limited to one organ, or set of organs, but involve the system in general. To name this malady from the disturbance in one system seems an error, unless the definition is sufficiently elastic to include all the functions affected. Neurasthenia names one, only, of the parts involved. There are two factors supposed to be especially influential in this country—work, and our exciting political and social life. I believe that the effect of these is greatly overrated.

The brain, of all the organs of the body, illustrates, in the most perfect manner, that which has been happily styled "the principle of least action." That is, to execute given tasks, it expends the least possible force, or, to express the same idea in another form, its work is

done with ease, with the minimum of effort. Given a certain amount of repose—sleep—and supplied with proper nutriment—healthy blood—the brain will do its allotted work continuously during its working—the waking—hours. So far from being injured by severe labor carried on under normal conditions, the brain is improved by it. Mental activity, like muscular exercise, keeps the brain in a healthy state. When, therefore, a man says he is suffering from the effects of mental overwork, I want to know what his vices are. Worry may be one of these. The ease and luxury of our American life another. It is the indulgence in eating and drinking, the abuse of alcohol and tobacco, sexual excesses, sedentary habits, and too luxurious lives generally, that induce the state of the system called nervous exhaustion.

Why are the somatic derangements caused by the conditions referred to, in some cases accompanied by the mental and nervous symptoms which belong to neurasthenia? Why do some subjects with indigestion and assimilative disorders, or with the results of dyspepsia and malaria, suffer from the derangements of the mental and nervous functions, and not others. I might here take refuge behind an accepted generalization, and say that the presence or absence of the neurotic type of constitution explained the difference in the result. There is aptness in this explanation, but it is not entirely adequate. There is a mental condition of great importance, and unless we comprehend this, we fail to realize all the possibilities of the nervous side of these cases. I, however, barely hint at the main points, under these circumstances. Besides, I wish to avoid a too metaphysical discussion of the subject.

In the conduct of life every man who has a position to make or to maintain, exerts a certain moral force to hold himself up to his work. Some men are so happily constituted that they are quite unconscious of the effort and stand in the front, serenely confident. Others are all the time laboring; they feel it and know it, and like the soldiers of Thomas's corps at the battle of Chickamauga, sorely pressed, now and then look back, to see whether their grim and resolute commander was still behind them with his invincible courage. Men conscious of the effort making to keep up, need but little excuse to surrender themselves to their sensations. At the present time nervous prostration is much feared; its symptomatology is a common subject of discussion; and hence, familiar with its character, a man who is arrested in his career by some of the ailments supposed to belong to it, his imagination readily supplies the rest. When a man begins the study of his bodily sensations, having a certain model in his mind, he has little difficulty in filling out the details. All the world knows that when the attention is strongly fixed on an organ of the body, functional disturbances of it ensue, and finally structural changes may be induced. No part of the body is without sensation, even in health. To perceive these sensations the attention needs to be withdrawn from external things, and concentrated on the part. Thus it is when the subject of neurasthenia pursues his introspection, he becomes conscious of numerous sensations, which, because now felt for the first time, are new. Under these circumstances, also, the seat of conscious impressions becomes more acutely perceptive. Suggestion adds its quota of symptoms.

To the indefinite and multiplying nervous symptoms developing thus subjectively, must be added the reflex. Headache, vertigo, *tinnitus aurium*, amaurosis, diplopia, hallucinations and illusions, defects of speech, paralysis, are reflex symptoms on the part of the brain; palpitation, intermittent pulse, angina pectoris, laryngismus stridulus, asthma, are amongst the reflexes of the respiratory organs and heart; neuralgia, anæsthesia, and other disorders of the sensory nerves, and local paralyses, affections of the motor nerves, included amongst the nerve reflexes, may all be dependent on reflex excitations proceeding from the stomach. Indeed, there is no symptom in Beard's catalogue of those belonging to neurasthenia that may not be due to merely reflex influences having their initial seat in the digestive apparatus. It follows that the term neurasthenia, or its common equivalent, nervous prostration, is either inadequate, or it expresses too much. Inadequate if the complex of symptoms includes the functional disturbances of all the organs affected; expresses too much if the malady is a merely nervous one.

In reply to the question, "What is meant by nervous prostration?" I respond: A disease usually functional, situated in one or more organs, during the course of which reflex disturbances of the brain occur, and numerous subjective sensations in all parts of the body are realized by the consciousness. I deny that neurasthenia is a primary nervous affection, or that it is a substantive disease. I hold that it is symptomatic and secondary.

This conception fixed in the mind, the treatment of neurasthenia is successful or unsuccessful according to the measure of our skill in localizing the initial disturbance, and in addressing our remedies to that as well as to the general state.

DR. MILLS, in opening the discussion, by request of the Chair, said: I understand that Dr. Bartholow denies that a disease exists, primarily nervous in origin, which can be called neurasthenia. He classes all cases so-called under two heads, congestive and anæmic, and holds that the symptoms presented are chiefly reflex effects of digestive or other visceral troubles. I have no doubt that many cases are to be thus explained, but we have others in which the cerebral condition is primary. In cases with the symptoms as detailed in the paper, we may perhaps clearly ascribe them to the causes and conditions referred to by Dr. Bartholow, but other cases may be explained in a different manner.

In individuals whose higher ganglionic centres are so constituted, from bad inheritance or poor training, or both, that they cannot bear much strain, when subjected to this strain these centres exhaust. We have certain functions called organic functions, respiration, vasomotor action, etc., with centres in medulla oblongata and spinal cord. These functions must be maintained as long as the individual exists. Their centres must be nourished and sustained in a uniform way. Presiding over automatic movements, they must be kept in the highest tone, must have good blood and plenty of it. It is a principle brought out in the paper that local diversion of blood to any one organ or part will take it from other organs or parts; and we may, in accordance with this, have the higher brain diverting blood from the lower, or lower brain from the higher. We have *nervous* symptoms, the result of this overstrain of nerve-centres, and the disturbance of the equilibrium of the circulation, thereby brought about.

The point that has particularly attracted my notice, was an allusion to the condition of the urine in one of the cases. It was described as dark brown, of high specific gravity, containing a trace of sugar. I have seen such cases, and think it not unlikely that the apparent sugar reaction is really due to uric acid, which is often abundantly present in these urines of deranged digestion. If we get rid of the excess of uric acid by allowing it to precipitate spontaneously, or precipitate it by the addition of an acid, the sugar reaction with the copper tests does not take place. Other characters of the urine, particularly its dark color and scantiness, are not usual to sugar-containing urine.

DR. ESKRIDGE: The most important point in the subject is whether the condition called neurasthenia is primarily a nervous disorder, or a disturbance in other parts of the body. Those who have paid attention to this subject say that breakdown does not occur unconnected with either worry or vice. I have never seen a case from mental overwork alone.

It appears to me that nervous prostration, so-called, is a depressed condition of the whole system, the trouble manifesting itself as a general nervous condition secondarily, after organs other than the brain have been primarily affected. The therapeutics also favor this view, because the cases are benefited, not by agents addressed to the nervous system alone, but by hygienic and tonic measures.

DR. BARTHOLOW, in closing the discussion, said: The great question is, Is neurasthenia functional, or does it arise from organic change in the nervous system? I maintain that it is largely reflex and frequently from gastric disturbance. Neurasthenia in women is associated with an anæmic condition and ovarian and uterine disorders. They are pale and weak, and if they are subjected to any moral or mental trouble give way, but if they are well nourished, sustain any kind of shocks without suffering in health.

Worry has been mentioned as a cause of nervous exhaustion; now, worry hurts a man just in proportion to his condition. If he is in good health, or phlegmatic in temperament, the worry may be well borne; but if he is out of health, worry will have a powerful effect on the nervous system. I do not deny that various causes may produce brain disease, but I deny that the so-called neurasthenia is due to an organic lesion of the nervous system. I maintain that it is part of a morbid complexus; a reflex condition, in large part, of maladies situated in the stomach, the liver, the uterus, or other organs.

DR. WM. S. LITTLE then read a paper on

EYE SYMPTOMS AND CONDITIONS IN BRIGHT'S DISEASE.

Among nine hundred and eleven cases of Bright's disease reported by different observers, changes in the retina have been observed to be associated with the kidney affection in twenty per cent. The recognition of Bright's disease from lesions in the eye, in a case already diagnosed from symptoms in other organs, is not of so much importance for diagnosis as it is a help in forming a prognosis; nor does the condition existing in the eye demand the therapeutics of special medicine.

Retinitis, generally symmetrical, if not always so, appears in all forms of kidney disease, while it is principally associated with the chronic disease of the cirrhotic kidney. Even though symmetrical, its presence is not always known to the patient; especially is this so, as long as the region of the macula lutea in the retina is not affected, so as to produce a central scotoma; lesions near the nerve and peripheral parts of the retina are not so productive of recognizable scotoma in the field of vision. These cases do not have the restricted visual field and rarely the loss of color-sense that belong to the optic nerve and brain troubles or contracted field of glaucoma. The symptoms may correspond to those of retinitis from any other cause: flashes of light, color sensations, dread of light, impaired vision, to total blindness.

While the lesions occur generally near the optic nerve and to the temporal side, the nerve itself is not implicated to the degree that might be expected from the picture it presents; the separate spots in the retina finally coalesce, approaching the disk, and involving it; in other cases they surround the region of the fovea centralis, and are much smaller. They may occur anywhere in the retina, varying in size; the shape is somewhat quadrilateral, but may vary as they progress; they present a white appearance. The tissue near the disk and the disk itself appear striated; spots of hemorrhage are found from rupture of retinal or choroidal vessels; opacities in the vitreous are seen. The state of pigmentation is the latest. In chronic cases the color of the fundus is peculiarly yellow, and the character of the picture is at times very much like the neuro-retinitis of brain disease or pernicious anæmia.

The changes result from the hyperæmia and infiltration of the tissue, fatty degeneration and atrophy producing changes in the bloodvessels with hemorrhage; a fatty deposit in the retinal tissue; the fibres of the retina become sclerosed, and pigmentation follows.

The optic nerve is not seriously involved, though gray degeneration may exist, and numerous amyloid bodies may be seen with the microscope. The retina does not always present all the stages described; the kidney disease being amenable to treatment, the retina may not undergo any further change; where it is chronic, a like progression ensues in the retina. Marked lesions at times disappear, leaving only a slight trace. The hemorrhagic state is more severe, the sight not only being lost, but the patient's life endangered.

The prognosis, so far as vision is concerned, is serious, when the region of the yellow spot is encroached upon, and yet fair vision may remain after subsidence of the disease.

Can a prognosis as to the duration of the disease or to its fatality be derived from the eye symptoms? Only in the chronic stages of the disease, when retinal hemorrhages are extensive and repeated, the heart being diseased. Traube considered the heart the immediate cause of these retinal hemorrhages; but they exist in cases without heart trouble, and in other diseases of the system, and in intraocular conditions. Brain symptoms soon follow in these severe types of retinitis, in chronic kidney disease a general hemorrhagic condition being developed, or uræmia may ensue. In the acute forms of Bright's disease no prognosis of any value can be formed from the eye symptoms, though severe.

As to treatment of the eye in this disease; what renders the disease of the kidney controllable, is only of advantage to the retina; leeching may be useful if the

patient is not too anæmic. For the vitreous opacities, in cases where the disease is under control and the acute condition of the eye abated, electricity is of considerable value, much more so than any plan of medication.

DR. ALBERT G. HEYL desired to direct attention to the relation which exists between the intraocular phenomena observed in Bright's disease and the anatomical arrangement of the intraocular arteries. The latter are divisible into certain areas; thus we have one area composed of the arterial circle of Zinn, which supplies the optic papilla; another formed by the arteria centralis retinæ, which supplies the retina; another composed of short posterior ciliary arteries, which supply the posterior half of the choroid; yet another composed of the long ciliary arteries which supply the iris and the anterior half of the choroid; the short anterior ciliary arteries also take part in the formation of this area. Now, it is established that abnormal changes in connection with Bright's disease may exist primarily in each of these areas, with perhaps one exception, to be mentioned directly. Thus the papillary area may be affected, and a papillitis will be found on examination, the choroid and retina and iris being unaffected. Again, the posterior choroidal area may be affected, and there will be found the phenomenon of subretinal œdema, and also in the choroid the white accumulations so well known in connection with Bright's disease. Both of these forms are considered to be rare; perhaps they would be observed oftener were we more alert. A case reported by him (THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, October, 1874) of retinal separation occurring in one eye, while simultaneously the other was affected with temporary amblyopia, probably belonged among the affections of the posterior choroidal area. Further, the retinal area may be affected, and the peculiar retinal appearances so well known are found. So far as he is aware, no separate affection of the irido-choroidal area had been described; there seems to be no reason why it should not occur. Of course there are many cases in which the areal lesions exist together, but they are to be looked upon as the result of one common cause, not as the result of a morbid process starting in one area and gradually implicating the others.

In referring to the snow-like patches of the fundus, commonly looked upon as the characteristic intraocular appearance of Bright's disease, he thought that to a certain extent they are to be looked upon as the remnants of intraocular hemorrhage. While hemorrhagic clots formed of normal blood are absorbed without any whitish residuum being left, the case is different where the blood, as it circulates in the vessels, is in a morbid state. Thus, in a case of pernicious anæmia, he has observed a number of round red hemorrhagic spots with white centres. On examination ten days later the red coloring-matter of the hemorrhages had largely disappeared, leaving as a residuum white masses. Some of these were speckled with red points, arranged in spindle form like the hemorrhages of the retinal nerve-fibre layer. They were, however, simply the unabsorbed remnants of the round hemorrhagic spots seen ten days before. So in morbus Brightii, the blood is in such a morbid condition that hemorrhagic clots rapidly lose their red coloring by absorption, leaving behind a white residuum which may partially, at least, explain the white plaques seen with the ophthalmoscope.

DR. JAMES TYSON then presented a note on some

RECENTLY SUGGESTED DELICATE TESTS FOR ALBUMEN.

He said that recently several delicate tests for albumen have been suggested by different observers. Among them are: 1. A saturated solution of picric acid; 2. Saturated solution of ferrocyanide of potassium after free acidulation by citric acid; 3. Standard solution of potassio-mercuric iodide,[1] after acidifying the urine by citric acid; 4. Equal parts of a saturated solution of sodium tungstate (1 in 4), saturated solution of citric acid (10 in 6), and of water; 5. Acidified solution of potassio-mercuric iodocyanide. To complete our list of available tests we may add: 6. The ordinary heat and acid test; 7. The nitric acid test, by Heller's overlaying method; and, 8. The acidulated brine, consisting of an ounce of hydrochloric acid added to a pint of water saturated with common salt, and filtered.

The whole subject of these delicate tests has been gone over by Dr. George Oliver, of London. As all of the tests which are not distinctly acid require the previous acidulation of the urine, Dr. Oliver has modified the picric acid solution by adding two drachms of citric acid to one ounce of the solution. Leaving out the potassio-mercuric iodocyanide as a solution troublesome of preparation, Dr. Oliver's results as to all the other tests just named are as follows: Adopting the method of overlaying the test solution by the urine (all of them as above prepared are specifically heavier than ordinary urines, while the pure picric acid solution is lighter), *one part of albumen* may be detected in

PARTS OF URINE.		TESTS.
20,000	by the	Iodo-mercuric, Picric acid, Tungstate.
10,000	by the	Ferrocyanide,
12,000		Acidulated brine.
6,000 to 7,000	by the	Heat, Nitric acid.

Dr. Tyson said: I have carefully repeated Dr. Oliver's testings, and have arrived at results which, while not identical, may be said to be practically the same—except, perhaps, in the case of heat and acid combined, which I find decidedly more delicate than the pure nitric acid, and more delicate than the acidulated brine solution. So, also, I do not find the sodium tungstate solution quite as delicate as the picric acid and the potassio-mercuric iodide; but they may be placed in the same category. As the result of this experience, it appears to me that the use of nitric acid may be altogether substituted by the acidulated brine, as a solution at once more delicate and, on account of its non-corrosive properties, altogether more satisfactory to manipulate.

In THE MEDICAL NEWS for October 27, 1883, Drs. Cooke and Watkins prove that the urine of persons taking six grains of quinia or cinchonidia daily will invariably give a precipitate with picric acid, nine or ten hours after the administration. Also, that solutions of sulphate of quinia and of cinchonidia containing $\frac{1}{120}$ grain gave a decided precipitate, and one containing $\frac{1}{180}$ of a grain an appreciable precipitate. With a view to testing these results, I tested my own urine on a

[1] Mercuric chloride, 2.7 grammes; potassium iodide, 6.4 grammes; distilled water, 100 cubic centimetres.

given day with picric acid, and found no response. On the following day I took twenty-two grains of sulphate of quinia in three doses, taking the last dose at 6.30 P.M. The urine passed at 8.30 P.M. gave a beautifully distinct white line, when overlaid by a pure picric acid solution. So also did the urine passed at 9 A.M. the next day; but that passed at 3 P.M did not respond. I also found that a solution of sulphate of quinia containing $\frac{1}{100}$ of a grain to the fluidounce responded similarly. I then repeated the experiments with the remaining tests, and found that the potassio-mercuric iodide gave identical results with the picric acid solution, *but that the sodium tungstate and ferrocyanide of potassium solutions did not.* So that we shall have in these two solutions, and particularly in the sodium tungstate, a test solution more delicate than heat, acid, or brine, which does not precipitate quinine in solution.

Picric acid has also been shown by Dr. George Johnson to precipitate artificially prepared peptones. And the same is true of potassio-mercuric iodide and sodium tungstate; and as peptones have been shown to be present in a considerable number of urines, they must be admitted as possible sources of error, the exact importance of which is as yet to be determined. The ferrocyanide solution does not precipitate peptones, but, in common with the others, occasionally precipitates amorphous urates. But these, behaving precisely like the amorphous urates thrown down in the Heller test by nitric acid—that is, forming a smoky cloud rather than a distinct layer, and being easily dissipated by a moderate heat—need not be a source of error. An excess of albuminous urine dissolves the precipitate formed by picric acid, but this need not be a source of error. It is said, too, that potassium salts are precipitated. But, so far as we know, no other agencies likely to be found in urine can lead to error; so that, if we remember to eliminate quinine as a source of error, the picric acid solution, acidulated with citric acid, is still an available test of great delicacy, which is further recommended by its cheapness and easy preparation; although, so far as our present knowledge goes, the sodium tungstate solution is the best, and least liable to cause error.

DR. DULLES said that the error caused by the precipitation of quinine by picric acid, may be corrected by adding nitric acid, which dissolves the quinine precipitate, but not that of albumen.

DR. LEFFMANN said that he has found the glacial phosphoric acid the most delicate and easily applied test.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, January 8, 1884.

THE PRESIDENT, WILLIAM J. MORTON, M.D., IN THE CHAIR.

NOTE ON THE USE OF THE MENTHOL CONE AS AN ANODYNE.

DR. E. C. WENDT showed a little contrivance, called by the Germans *Migräne Stift*, and explained the method of its application and uses. It consisted of a piece of menthol moulded into a conical shape and secured in a little wooden box, closed by a cover to prevent evaporation, soiling, and breaking. It seemed to be very little known here, although it is much used abroad, especially for sick-headache. His attention had been first directed to the anodyne properties of menthol by a short notice, published in the *Medical Record* of April 28, 1883, by Dr. Cammann. That gentleman had recommended an alcoholic solution of menthol (℥j to ℥ss alcohol) to be painted over the affected parts. Dr. Wendt had since that time often used this solution, and found it a rather reliable anodyne. Its pain-relieving action was restricted, however, to the slighter ailments, especially those of neuralgic character. Since his acquaintance with the solid menthol cone, he had frequently substituted the direct application of menthol, by means of the latter, for the solution formerly employed. He would admit that the only advantage which the solid cone or pencil had over the solution, consisted in the greater simplicity of its application, its ready portability, and the fact that its vapor was not apt to irritate the eyes of susceptible patients. He had repeatedly heard complaints in that direction from ladies, regarding the solution, which was obviated by using the cone.

In this country menthol had not yet received that amount of recognition from the profession, to which its pain-obtunding properties would seem to entitle it. In fact, little seemed to be known about it, and for this reason Dr. Wendt thought it might not be amiss to quote a descriptive notice which had appeared in the *Midland Medical Miscellany*, of October, 1883.

"Menthol or menthylic alcohol, $C_{10}H_{20}O$, is a crystalline substance, deposited from the oil of peppermint, prepared in China and Japan from *Mentha Arvensis var. Piperascens and Glabrata.*" It formed the chief ingredient of a much valued remedy for neuralgia before its nature or source was generally known. Under the name of po, ho, yo, or *Gouttes Japonaises*, it has been sold in small bottles, labelled with Chinese characters. It is a white crystalline stearoptene, melting when pure at 97° Fahrenheit, and is obtained by the Japanese from the oil of peppermint, by submitting it to freezing several times in succession until no more menthol crystallizes out. It is also said to be contained in the American and English oils of peppermint, but probably in small quantities only. It is somewhat surprising that the Japanese peppermint plant which is grown in England as a curiosity, has not been cultivated in that country as a source of the drug, the supply of menthol being uncertain, the demand great, and the price in consequence occasionally very high. Menthol is said to be sometimes adulterated with crystals of Epsom-salts, to which it bears a great resemblance. These being insoluble in alcohol or chloroform, in which fluid menthol is freely soluble, can easily be detected. Samples of fine crystals sometimes contain some essential oil adhering to them, a fact which must be taken into consideration when the menthol is made into cones or pencils. Menthol is but slightly soluble in water, although imparting a strong odor and taste to that liquid, and is insoluble in aqueous alkalies. It is soluble in fixed and volatile oils and in ether.

Although Dr. Wendt's experience with menthol had not been a very extended one, it had nevertheless been sufficient to convince him of the utility of the drug, in a rather large class of cases. Thus, as already stated, he had found it a very pleasant and reliable anodyne in all the lesser neuralgias, and especially in those so frequently occurring about the face. But it was also ser-

viceable in many painful affections due to inflammatory processes. For example, in mumps, in the cervical adenitis so often accompanying sore throat, and in numerous other affections where pain was a prominent symptom, menthol might be used to advantage. With regard to its topical action, it was similar to that of aconite, over which it had the advantage of not being poisonous.

Dr. Wendt remembered one rather striking case of quite severe supraorbital neuralgia, which refused to yield to the oleate of aconitia, but was much benefited by the menthol. But, on the whole, in violent attacks he had found it almost useless. In typical migraine, for instance, where the pain was at all severe, and in all deep-seated aches of more than very moderate intensity, it had no appreciable effect, except, perhaps, the indirect psychical action of distracting the sufferer's attention.

In the discussion which followed these remarks, DR. ROBERTS asked Dr. Wendt if he had tried the prolonged application of menthol.

DR. WENDT said that he had in some cases of hemicrania, though without decided benefit. Nevertheless, the patients experienced a pleasant sensation of coolness of the surface followed by a feeling of agreeable warmth.

DR. MORTON desired to ask Dr. Wendt, in what sense he used the word anodyne. Dr. Wendt said in the usual one, of affording relief from pain by blunting sensibility.

DR. MORTON thought that menthol probably acted more after the manner of counter-irritants, by insuring relief in a reflex rather than directly local way. Mustard was a typical peripheral nerve-irritant, and it seemed to him that the action of menthol could be best explained on the same principle, of procuring peripheral nerve-impressions in a reflex way.

Dr. Morton stated that his attention had been first called to the menthol cone by Dr. Wendt. He chanced to be at the latter's office one day when suffering from a headache. A few strokes of the menthol gave him at once a sense of relief. He felt the effects of the peppermint to be as gratefully cooling as the application of, say, cold metal. In brachial neuralgia, as well as in sciatica, he had been pleased with the good effects of menthol. He thought the drug was deserving of further trials.

CORRESPONDENCE.

THE PRESENT STATE OF MEDICINE IN JAPAN.

To the Editor of THE MEDICAL NEWS.

SIR: As the word Japan seems to open visions of El Dorado to all non-resident aspirants to fortune, and lest the heading of my letter should incite some of my brethren to its perusal in hope that it may prove in some sort a directory to the, presumedly, overflowing wealth of the Orient, let me begin by a word as to the status and prospects of European and American physicians in this portion of the Far East. As to present status, those medical men now here, save of the small and rapidly decreasing number in government employment, are doing, and must do, more work for less remuneration than in even our smaller cities at home, while the expense of living in decent comfort is far greater in Japan than in the United States.

This country is now passing through a severe financial crisis; business of every kind is at a standstill, and as the foreign practitioner must depend almost exclusively upon the foreign residents for his support, the depression of trade affects him severely. It is but rarely that the services of a foreign doctor are called for by the natives, first, because the majority of these much prefer their own physicians; second, because they are rarely able to pay for his services—in fact, cannot understand that a physician's time or advice has any money value, the old custom—still almost universally in force—being to pay the medical attendant for medicines furnished, for which alone the physician has a legal claim to remuneration, and to pay, or not to pay, in addition, an honorarium generally ridiculously small, and entirely a voluntary matter; third, because in the larger cities of the Empire there are foreign medical officers attached to the Government hospitals, whose advice can be had by the richest at an expenditure amounting to little more than the wholesale cost of the medicines prescribed. The number of foreign doctors thus employed is now small and diminishing, their places, at the expiration of their contracts, being filled by natives educated abroad, or at the Imperial Medical School mentioned hereafter. Our services—I speak as one of the resident foreign physicians—are even less in demand by the natives than formerly, for Japan has, perhaps, made more real and solid progress in medical science than in any other branch of western learning, and has now a considerable number of fairly good men—either educated in foreign countries, where some have won honors, or under foreign instructors in the Government hospitals and medical schools at home. In addition to these better men, who, of course, are found only in the Imperial service or in the larger cities, there is to be found in almost every town of the Empire at least one native physician practising, so far as his education will permit, according to the modern system.

The Government offers every encouragement for the advancement of the native practitioners in modern science. The innumerable appointments in its gift are bestowed only on men of the new school, while, as regards those practising privately, a system of examination and graduated license has been put in force throughout the Empire, which would afford no bad model for adoption in some of the United States.

Japan has now a considerable literature of modern medicine, which is rapidly increasing, and there are also something like a dozen medical periodicals, well supported. It is true that the execution of the translations, which compose the bulk of the literature in question, leaves much to be desired, yet the essentials of the original are generally preserved, and gross errors infrequent.

Ten years ago, the number of books on modern medicine in the Japanese language could have been counted on the fingers of one hand, while the writer at that time established, under Government auspices, the first medical journal of the country. A few months ago, a shipment of some four hundred volumes of medical text-books was sent to the library of the Surgeon-General, U. S. A., at Washington, and nearly as many more will shortly follow. Many of these are really beautiful reproduc-

tions of expensive illustrated works from the presses of Europe or America, though original treatises of almost equal mechanical execution are not wanting. It follows that, should any of your readers wish to investigate for himself the state of medical literature in Japan, he will find material within reach, the library mentioned containing, in addition to the above-mentioned books, full sets of the leading medical journals of this country.

The exquisite workmen of Japan have, of course, undertaken the manufacture of surgical instruments and apparatus — almost all known surgical appliances, of native manufacture, being found in the shops of the dealers in medical supplies. In appearance and finish, the instruments of domestic manufacture are indistinguishable from those imported, and, with the important exception of those whose value depends upon the quality and temper of the steel employed, are equally useful. It is difficult to understand the failure of the native artisan in the construction of small articles of steel, for the Japanese metal is second to none in the world, as will be readily granted by anyone who has seen the tests endured by a Japanese sword of good quality. When this difficulty in the management of small articles of steel shall have been overcome, as no doubt it speedily will be, the Japanese surgeon will be able to furnish himself more cheaply than in any other country.

It will be seen, then, that so far as material goes, the means are not wanting for the theoretical education or the equipment of every native student, while the many and often admirable hospitals maintained by the Imperial Government, or by subscription, afford good opportunities for clinical study.

Facilities for anatomical work are, however, sadly lacking. Though Japan has an anatomy law, which many of our benighted States would do well to copy, its operation is so hampered by the prejudice and mistaken benevolence of the people, that even in the great city of Tokio (Yedo) the Imperial School of Medicine is unable fully to supply its students with anatomical material, while in the provincial hospitals and schools opportunities for dissection are rare indeed. Realizing the value of anatomical study, and the difficulties in the way of its pursuit, efforts have been made to compensate for the want of actual dissection by the publication of elaborate atlases and anatomical wall-plates, and even by the reproduction in fac-simile of Auzoux's great manikins at a price of about one-third the original. The lack of facilities for the study of practical anatomy is the more, perhaps, to be regretted from the fact that the Japanese excel in many of the qualities which go to make a successful operative surgeon. Steady nerve, marvellous dexterity, mechanical tact, and a power of mentally reconstructing form that is absolutely astonishing, are qualifications to which, if a knowledge of anatomy were added, the product should be a surgeon above the average.

À propos of this power of recalling form, which is almost universal among the better class of Japanese, I am inclined to attribute it to the personal and hereditary influence of training in the use of the Chinese character, a knowledge of several thousands of which complicated and arbitrary forms is necessary to every Japanese who would either read or write anything esteemed of value. The æsthetic sense of the race may also have influence in this direction.

I have spoken of the Imperial School of Medicine at Tokio (Yedo), and of the larger hospitals throughout the country, as affording opportunities for instruction under foreign teachers. The former is under management exclusively German, and, in fact, of late years, German physicians have had almost entire control of the medical education of the country. With many others of long experience among the Japanese, I believe this to be a sad mistake, the more so as the curriculum of the Imperial School is modelled almost exactly upon that of the German universities. Quick, ready, and intelligent as the Japanese undoubtedly are, their mental calibre is, in many respects, that of precocious children, and their science is, and for a considerable period must remain, imitative and routine. With the concrete, the native mind is familiar and expert; with the abstract, it can do little. What Japan needs, at this time, is a considerable body of men sufficiently educated to deal with the ordinary diseases of the country, and she needs them urgently. What the Imperial School is endeavoring to do under the disadvantages of the use of a foreign language, useless for any other purpose of study or business, for which English is universally preferred, enforcing new methods of thought, and having an eminently practical race to work upon, is to turn out men fitted for original investigation of the deepest mysteries of science and versed in all the theories of modern medicine, proved or purely hypothetical. What this school really does, is, yearly, to graduate the few who are found physically and mentally competent to stand the strain, having all the faults of the German school of medicine in aggravated degree, therapeutic nihilism their creed, and holding the welfare of the patient even more entirely subordinate in interest to the natural history of the case, than do their teachers.

That Germans now have the preference in Japan, as teachers, in almost all branches of science and literature, is probably due to the fact that the more conservative members of the Government feel that the country has progressed rather too rapidly toward free thought and free institutions, and believe the political system of Germany to be more in accord with that desirable for Japan, than those of England and America. The students themselves, however, much prefer the English language and English and American books, even as regards medicine, and it is chiefly from these sources that the present literature is derived.

The old school of medicine in Japan was nearly identical with that of China, a melange of superstition and an absurd and utterly artificial system of anatomy and physiology, with the results of ages of empirical practice —the latter having led to a more or less correct appreciation of the use and value of many medicines used by ourselves, *e. g.*, mercury, antimony, and aconite. In addition to a vast number of plants and minerals, animal substances form an important element of the old pharmacopœia. Whole cargoes of dried fœtal deer are yearly shipped from the island of Yezo to southern Japan and China; while dried lizards, tigers' claws and teeth, bears' galls, monkeys' skulls, and other even more repulsive substances, are largely used. In fact, the Chinese practitioner of to-day is working with much the same armament as did our predecessors in the not very long past time when treacle of mummy was a panacea. But, absurd and disgusting as the materia medica of the

old school of medicine in Japan and China may at first glance appear, it is probable that in their immense, and to us little-known, field of natural resources the empiricism of a shrewd people has discovered some therapeutic agents of value, and such as would repay a thorough investigation of their pharmacopœia by some medical Sinalogue. I will return to this subject further on.

Although trained in the same school and holding allegiance to the same ancient authorities, the essential difference between the stolid conservatism of the Chinese and the active and progressive disposition of their insular neighbors, was shown even before the opening of Japan to foreigners generally, by the attainment of a partial emancipation from the thraldom of the old school through the voluntary efforts of native practitioners, and this, too, at a time when even to read a foreign book without the special permission of the Government was a capital offence. A native doctor, having accidentally seen a volume of anatomical plates at the Dutch settlement of Nagasaki, returned to his distant home disquieted and anxious, realizing that if the drawings he had examined were correct, his whole system of science, based as it was on different premises, must fall to the ground. Unable to prosecute research upon the human cadaver, he carefully dissected all the quadrupeds he could obtain, and finding, throughout, close similarity to each other, and to the pictures he had seen, he at last, after great labor and no little danger, obtained permission to dissect a criminal. This dissection settled the question for himself and friends, for the science of the western foreigner was vindicated. From this began a movement, resulting in permission being given that a limited number of natives might study under the Dutch surgeons at Nagasaki, and in the translation of a few medical treatises of an elementary character.

Another instance of progress is even more remarkable, as it was entirely independent of assistance from without. A native physician, belonging to a family with whom the practice of the obstetric art was hereditary, for male accoucheurs have long existed in Japan, though in small number, after many misfortunes in the line of his practice, and a long time devoted to study and investigation, elaborated a fairly complete system of midwifery, and published an illustrated treatise on the subject. Kagawa Shigen found the obstetric art of Japan in a condition little, if any, better than among the American Indians of to-day; he left it almost upon a par with that of Europe before the invention of the forceps. He invented a number of convenient and practical instruments, which, though in some respects resembling others of European origin, differ sufficiently from these to prove independent evolution, while his book, which affords intrinsic evidence of originality, contains a series of really valuable precepts and clinical observations. Unfortunately, like the Chamberlens, Kagawa attempted to keep his improvements secret within the limits of his own family, and, unlike the Chamberlens, succeeded, until recently, in so doing. A descendant of the reformer is to-day practising in the capital, and exhibits so little of the ancestral spirit as to ignore all science save as contained between the covers of his inherited manual.

The aged Solomon's grumbling remark, that there is nothing new under the sun, seems to derive much confirmation from the Orient, and it need hardly surprise one greatly to learn that any of our supposed recent discoveries were anticipated ages ago in the Far East. Am I wrong in believing that the extract of malt is esteemed by many as one of the most recent triumphs of restorative medicine? The Japanese and, to some extent, their Celestial neighbors have used this article, or something closely related thereto, for centuries. The experience of my foreign colleagues and myself in the medicinal use of the native preparation has been so favorable that I cannot refrain from a few remarks upon it, even though quite aware that this long and gossiping letter should ere this have been brought to a close.

The article in question is known in Japan as "ame" or, in its better form, as "midzu ame," and as it is the latter which is most convenient and valuable for medicinal use, it is of this variety that I shall chiefly speak. Midzu ame, of the best quality, is a clear, transparent, faintly brown, or amber-colored syrup, or may have the consistence of candy, according to the amount of water contained. If properly prepared, it ferments only with difficulty, and long keeping changes it only by inspissation. The flavor is pleasant; so much so that some of our foreign residents prefer it, for table use, to the best imported syrups, while, when used medicinally, it rarely becomes distasteful, even after prolonged administration.

To describe in detail the manufacture of midzu ame would occupy too much space at present. Suffice it to say that it depends upon the now generally known fact that starch, in the presence of malt in solution, is converted into a saccharine body (maltose). The malt used is, as elsewhere, derived from barley, germination having been allowed to proceed to a greater extent than is usual with us; the starch is that of rice or millet, preferably the former, of which a peculiarly glutinous variety is chosen.

The consumption of ame in its different forms is enormous in Japan. The cheapness of the article, as compared with sugar, renders it the basis of a large proportion of the confectionery used. I have spoken of its use by the natives medicinally; it is, however, only as a digestible and strengthening food for the aged and for hand-fed or weakly infants, that it has, until very recently, been prescribed, and from this point of view alone midzu ame will be found well worthy of trial elsewhere. So far as children are concerned, I know nothing more useful for the feeble or bottle-fed than the article in question. During the past five years, the writer having been first to call attention to the subject, midzu ame has been largely used by both foreign and native practitioners in cases of dyspepsia and malassimilation, of almost every variety, with such success that the consumption of the better qualities has considerably increased, while several manufacturers are now devoting themselves to the production of special grades for exclusively medical use.

Midzu ame ranks as a food close to cod-liver oil, for which it will often be found to be an efficient substitute. In many cases of phthisis it has proved so useful that I shall not be surprised should the lapse of time show that ame is quite as valuable in this disease as is the oil. It is, however, of its use in dyspepsia that I would specially speak. An experience of several hundreds of cases, both native and European, and in conditions varying from mere sluggishness of digestion to almost total and fatal inanition, has demonstrated that ame is

far more than an easily assimilated food. This it certainly is; but it has, in my opinion, a power to assist in the conversion of other food beyond that of any agent heretofore employed, and is to be relied upon to exert the action which we hope for from pepsin, artificial gastric juice and the like, but in which we are so often disappointed. It is probably this power which, in cases characterized by active fermentation, acetic or butyric, enables the ame, saccharine body though it be, to act as an anti-ferment, for it is in this class of cases that the benefit derived from its use is most speedily manifested.

Granting the foregoing statements to be correct, it will be seen that we have in the article under consideration a nourishing, agreeable, and easily digested food, which can often be taken, and duly appropriated, after cream, raw beef, acid emulsions, and the like, have failed, and which will frequently secure the digestion of more or less other food, almost from first administration. I would not be understood as asserting that this contribution from the Far East is either infallible or specific, but that it has often saved life and, in an immense number of cases, restored health, even after the failure of approved treatment, I am certain, as well as that the experience of most of my colleagues has been equally favorable.

It is to be hoped that an opportunity may soon be given for a thorough and unprejudiced trial of ame in the United States, and that, in order that such may be secured to it, whoever undertakes its introduction will put it in the hands of the profession only, in proper manner, and without the clap-trap and advertising falsehood which repel every honest physician from what may, perhaps, be a really valuable and much needed article.

STUART ELDRIDGE, M.D.,
Medical Director of Imperial Hospital of Kanagawa Ken,
Surgeon in Charge of the Foreign General Hospital of Yokohama.
YOKOHAMA, JAPAN, December 20, 1883.

NEWS ITEMS.

PUBLIC HEALTH.—Mr. Green, of North Carolina, introduced in the House of Representatives, last week, the following preambles and resolutions, which were referred to the Committee on Public Health:

Whereas, It is popularly charged, and generally believed, that divers and various articles of food, drink, and medicine are adulterated by admixture with baser and usually deleterious substances; and,

Whereas, Such adulterated compounds are injurious to public health, and calculated to shorten human life, therefore, be it

Resolved, That the Committee on Public Health be authorized and directed to inquire into the truth of said alleged abuse, and to report to this House the result of their investigation at as early a day as practicable; and, if it shall be shown that such practices exist, then to suggest or recommend in their report what further legislation, if any, is necessary to correct the wrong; and, that they may more effectually do their work, be it further

Resolved, That said Committee be, and they are hereby, empowered to send for persons and papers, and to employ such medical and chemical experts as they may deem necessary to carry out the end, aim, and object in view.

THE NEW YORK STATE MEDICAL SOCIETY AND THE CODE CONTROVERSY.—The annual meeting of the New York State Medical Society occurs at Albany this year on Tuesday, February 5th. At this meeting three distinct propositions in regard to the ethical question, laid over from the last meeting, will come up for action. The first of these in order is the no-Code proposition, or the declaration and resolution to abolish the present New Code. The second in order is a proposition to repeal the action taken on the Code at the meeting of 1882, leaving the Old Code to stand as it was prior to that action. This comes up as an amendment to the by-laws. The third is a proposition to substitute the National Code for the New Code. Then, when representation in the American Medical Association is regained, that the delegates of this Society be instructed to advocate such modifications in the National Code as may make it more liberal, or, if advisable, to urge its entire abolition.

All these propositions are amendments of the by-laws, and therefore require for adoption the "consent of two-thirds of the members present at an annual meeting."

They will probably come up in the order in which they were recorded, and that is as above given.

The first, or no-Code proposition, cannot possibly be carried without the New Code advocates, and these latter must have a two-thirds majority present in order to do it. That, too, will be impossible, unless the Old Code advocates absent themselves from the meeting in greater numbers than ever before since the adoption of the New Code. No Code is the only rational and logical position of this movement, and it is therefore doubtless the ultimate aim of the movement, and may be brought forward every year until it is carried, but its success this year is improbable.

If the second proposition be carried, the third will fail or be modified. But if the second fails of a two-thirds vote, the third will almost necessarily fail also, although it has a somewhat different aim. Neither will be allowed to succeed if the new movement can prevent it.

The time for any further discussion of any such proposition seems now to be past, and they will therefore probably be put upon their passage without the disagreeable wrangling and parliamentary tactics which have disgusted and disheartened so many conservative members, and probably kept them away from the late meetings. At least, there is no use, nor any common sense, in any renewal of strife. The Society is now hopelessly split, and that upon a principle of honor, or at least upon a basis which is assumed to be such by both sides of the split, because the revolutionists consider themselves as much bound in honor to destroy the old ethical basis of the Society's organization as the conservative element does to protect and defend it. And when a principle is involved, to yield is to submit. The vote, therefore, is to be for the final possession of the Society, and whichever party is defeated, must withdraw and form new organizations if they desire to have them. Hence, as a matter of professional principle and honor, it seems to be the professional duty, as it should be the pride, of every delegate and permanent member

of the Society, to go to this meeting and record his name on one side or the other of this vital issue. Doubtless, the Society will go on and flourish under whichever party gets the ascendancy, but so radical is the difference that it can never again flourish under both. The objects, means, and methods being radically different, it would only paralyze its usefulness to attempt to blend them, and therefore this coming vote is to decide into which of two very different channels the Society will in future direct its usefulness. In either channel it may or may not do as much good as before, and if not, the new organizations that may grow out of the division may more than counterbalance the deficiency. As both sides cannot now occupy the same ground, the question simply is, which shall hold it? and in this decision every man entitled to a vote on either side should see to it that his name is fairly recorded upon the side of his choice, after the full deliberation of two years. Whether his side succeeds or not is by no means the most important consideration, important though it be. The main point is to have his individual position clearly and unmistakably defined. The vote should, and doubtless will be, by ayes and noes, since both sides should be equally determined to have a full and clear record.—*Ephemeris of Materia Medica*, January, 1884.

THE NEW CODE IN CONGRESS.—Senator Hale introduced in the Senate, on Tuesday last, a bill "to secure to the medical profession equal rights in the service of the United States," which provides that all appointments to medical service under the Government shall be made from graduates of legally chartered medical institutions, without discriminating in favor of or against any school or theory of medical practice.

NEW YORK COUNTY MEDICAL ASSOCIATION.—The officers of this new Society are:

President.—Wm. Detmold, M.D.
Vice-President.—C. A. Leale, M.D.
Recording Secretary.—E. A. Judson, M.D.
Corresponding Secretary.—W. V. White, M.D.
Treasurer.—A. S. Church, M.D.

At the first meeting, held last week, at which Dr. Flint's paper was read, there were about three hundred physicians present.

LIBERAL BEQUEST OF DR. ELLIS TO HARVARD UNIVERSITY.—By the will of the late Dr. Calvin Ellis, his estate is left in trust for the benefit of his sister, and upon her decease fifty thousand dollars goes to Harvard College, the net income of which, after deducting five per cent. for the purpose of increasing the fund, is to be applied to the payment of the tuition and other expenses of certain descendants of Davis Ellis, and others who may be members of the College. The residue of the trust property, if any, is also to be paid to the President and Fellows of Harvard College, the income, after the same deduction of five per cent., to be applied to the payment of a salary of a professor of pathological anatomy, under certain regulations as to the amount of such salary.

ANNALS OF ANATOMY AND SURGERY.—It is announced that on account of the departure of the senior editor, DR. PILCHER, for Europe, and the expected departure of his colleague, DR. FOWLER, the publication of the *Annals of Anatomy and Surgery* is necessarily suspended during their absence. If circumstances shall seem to warrant the resumption of the journal with the beginning of another year, due notice will be given.

THE OHIO STATE SANITARY ASSOCIATION will hold its first meeting February 14 and 15, 1884, in the city of Columbus.

INTERNATIONAL MEDICAL CONGRESS.—The following list of subjects is proposed for communications and discussions in the Section of Dermatology and Syphilis:

1. On the Syphilitic Origin of Tabes.
2. Treatment of Syphilis with Mercurial Injections.
3. Excision of the Initial Induration as Abortive Treatment.
4. The Etiology of Leprosy.
5. On a New System in Skin Pathology.
6. The Etiology of Lupus Vulgaris.
7. The Pathogeny of Gonorrhœal Rheumatism.
8. The Term of Infectiousness of Gonorrhœa.
9. The Significance of Micro-organisms in Skin Diseases, formerly considered as Non-parasitic.—*Journal of Cutaneous and Venereal Diseases*, January, 1884.

DR. CHARLES T. PALMER, of Pottsville, has been appointed consulting oculist at the Miners' Hospital.

THE ANNUAL ELECTIONS AT THE PARIS SOCIETIES.—M. Marc Sée has been elected President of the *Société de Chirurgie*, for 1884.

M. Delpeche, President of the *Société de Thérapeutique*.

M. Bucquoy, President of the *Société Médicale des Hôpitaux*.

M. Laborde, President of the *Société de Biologie*.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending January 12, 1884, indicate that pneumonia has greatly increased; that measles, bronchitis, tonsillitis, and consumption have increased; and that rheumatism and whooping-cough have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending January 12, and since, at twelve places, scarlet fever at sixteen places, and measles at ten places.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 14 TO JANUARY 21, 1884.

BREWSTER, W. B., *First Lieutenant and Assistant Surgeon.*—Resignation accepted by the President to take effect February 7, 1884.—*S. O. 10, A. G.O.*, January 12, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

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ORIGINAL LECTURES.

THE TREATMENT OF SYPHILIS.[1]

A Clinical Lecture.

BY PROF. DUJARDIN-BEAUMETZ.

(Concluded from page 92.)

GENTLEMEN: Mercury is not the only metallic substance which has been prescribed for syphilis. Chrestien and Legrand have proposed preparations of gold, Serres of silver, Hoefer of platinum, and even of copper. All these preparations have been successively abandoned, but the treatment which has had the most repute is the vegetal treatment. The anti-mercurialists, struck by the ravages which mercury occasions, had essayed to substitute for it sudorifics, and from the sixteenth century, as a result of the influence of Delgado and Ulrich Von Hutten, guaiacum was considered as one of the most powerful anti-syphilitic medicines known. The success which was then obtained by the sudorific woods depended more on the severe regimen to which the patients were subjected than to any remedial qualities in the drugs.

Since then many attempts have been made to return to the vegetal treatment, and numerous have been the compounds of indigenous or foreign herbs in decoctions and alcoholic tinctures which have been prescribed, but these anti-venereal specifics are utterly unreliable. In Italy, Ubicini Galassi and others have experimented with the root of a member of the *Cucurbitaceæ*, viz., tayuya. I have not heard of any good results from the medicinal use of this plant, and Sigmund and Geher have shown it to be completely inert. Pilocarpine, that powerful sudorific, would naturally have been employed in syphilis, and if the sialagogue and sudorific action of a medicament can have any favorable influence in the treatment of venereal disease, this alkaloid, and jaborandi, which contains it, ought to be of efficacy. Notwithstanding the results of Lewin, which have not been confirmed by other experimenters, jaborandi does not seem to have any curative virtues in syphilis.

Of this vegetal treatment, nothing remains for consideration but the ptisans and syrups called depurative, almost all of which have sarsaparilla for their basis. If the vegetal treatment is absolutely without effect, it is not so with the treatment by the iodides, and particularly iodide of potassium. Since Wallace, of Dublin, in 1832, introduced iodide of potassium in the treatment of syphilis, this medicine has always been employed in this affection, and if there is still some dispute concerning the relative value of the mercurial treatment and the iodide treatment, everybody seems agreed in acknowledging the efficacy of the latter in syphilis. It has been proposed to substitute bromide of potassium for the iodide, and I told you in a former lecture that it was these first attempts in this direction which brought the bromide before the profession. During the last few years, Garet, taking up anew the former tentatives of Richardson, Magendie, and Gambrini, has counselled the use of iodide of ammonium, but thus far iodide of potassium remains almost the sole haloid preparation used. It is given in solution, either in water or in syrup of orange-peel.

I have spoken to you many times in the course of these lectures of iodide of potassium, and shall not then return to the use of this medicine and its therapeutic and physiological effects. I shall only add, that in syphilis iodide of potassium may be given in pretty large doses, and we have seen practitioners like Puche administer from twenty to thirty grammes a day. I do not advise you to follow this example, and I believe that generally you should rest satisfied with a dose of from two to five grammes (from thirty to seventy-five grains), and that it is only exceptionally that you should administer as much as ten grammes a day, for in very large doses peculiar toxic phenomena are likely to ensue, described under the name of *iodism*.

Whenever you give iodide of potassium in massive doses, do not forget that you must prescribe at the same time the milk diet. Milk, in favoring the elimination by the urine of the iodine, and in preventing the irritant action of this salt on the digestive tube, antagonizes the baneful effects of this medication. The solution which I advise you to use is the following:

℞.—Iodide of potassium, . . 225 grs.
Water, ... 8½ fl. ozs.—M.

Each tablespoonful of this solution contains about one gramme (fifteen grains) of iodide of potassium.

You should commence with small doses, and when the iodic coryza appears, discontinue for several days the use of the medicine, to resume it in larger doses. The economy in fact habituates itself to the iodide, and persons who, at the commencement of treatment, suffer from irritations of the mucous membranes as a result of small doses, a little later may bear without inconvenience much larger doses of this medicine.

By the side of these iodine preparations, certain authorities have counselled arsenic and sulphur. The first of these has been associated with mercury in a compound which enjoys a certain popularity, and which is known under the name of Donovan's solution. Ricord has also combined iodide of potassium with arseniate of soda. As for sulphur, it has, according to Martineau, a considerable place in the treatment of syphilis. It is a sort of touchstone, which enables us (by the exanthems which it promotes) to determine if the specific symptoms have entirely disappeared,

Such is the therapeutic arsenal from which you may obtain arms to combat this disease. But I have accomplished only a part of my task in pointing out the

[1] Translated from advance sheets by E. P. Hurd, M.D., of Newburyport, Massachusetts.

armor. You must know how to use it. We shall now study in their order the treatment of the disease in general, and the treatment of the disease in particular, *i. e.*, in the patient.

We are chiefly indebted to Prof. Fournier for formulating in a masterly manner the general treatment of syphilis under the name of *method of successive treatments*. Fournier's system is based on stages of treatment and periods of repose, which latter, called by him *periods of disaccustoming*,[1] enable the economy to obtain release from habits imposed on it by the mercurial treatment, and derive the utmost possible benefit from the medication during its entire duration. So the first year he prescribes for two months the mercurial treatment, to be resumed after two months of repose; and this practice is continued with similar alternations for two years in such a manner that during the twenty-four months the patient will not have been taking mercury but ten months. At the end of the second year he administers, concurrently with mercury, iodide of potassium, and this latter medicine exclusively during the third and fourth years.

Martineau has somewhat modified the formula of Fournier, and, while following out his system of successive treatments, he gives sulphur preparations during the periods of repose. Moreover, these periods, which Fournier has traced with great care, must vary according to the patients, and no absolute rule can be laid down. I am therefore of the opinion of Mauriac, who advises that the treatment should be modified according to the march of the syphilitic manifestations.

Does this method of successive treatments rigorously followed *ensure* the cure of the patient? Unfortunately, no. If, in the great majority of cases, all specific manifestations are made to disappear by a well-ordered treatment, religiously followed, nevertheless one can never be sure that the patient is rid forever of syphilis, and you will often see arise in patients who have been treated with the greatest care, at periods remote from the primary lesion, symptoms clearly the consequence of the first infection. This question of the cure of syphilis will present itself before you, Gentlemen, especially when the marriage of syphilitic persons is talked of, and you will be consulted for information as to what moment a contaminated individual may marry without danger to his or her partner and the children which may be born of this union. Fournier has treated this question in an able manner, and has shown that generally you cannot authorize such marriage till after a treatment scrupulously followed for three or four years.

Now that we know the duration of the treatment, it remains for us to determine at what time we should commence it. The sooner the better, say Fournier and Mauriac. At the appearance of the first syphilitic manifestations, say Sigmund and Zeissl. I believe that the last advice is the safer and wiser.

The diagnosis of the primitive lesion often presents great difficulties, and unless one is an expert and an experienced one, it is quite easy to confound a hard chancre with ulcerations of quite different nature, and particularly with herpes. These difficulties are often such that we see experts, in doubt, practise inoculations in order to determine the nature of the ulcerations which they have before their eyes. Therefore the practitioner ought to wait for the appearance of the roseola to confirm his diagnosis, and indicate the time for commencement of treatment. When the rash shows itself all his doubts are dissipated, and he may begin the administration of mercury. This delay of a few weeks is a very little thing in comparison with the duration of a treatment which lasts several years, and it has no detrimental influence on the evolution of the disease.

We have already examined two important points in the question of the mercurial treatment of syphilis: the duration of the treatment, and the moment when it should be commenced. It may now be asked if all cases of this disease ought to be treated with mercury and the iodides? My reply is, Certainly; every syphilitic individual ought to undergo the specific treatment. I am well aware that in his remarkable work on the *Natural History of Syphilis*, Diday has shown us that a great many syphilitic patients get well without treatment, and I know also that syphilis, like any other disease, has its mild forms and its severe forms; and, according to the soil in which it is implanted, it may take on a more or less rapid course. But what I am also convinced of is, that we often see very grave tertiary symptoms supervene in persons who have had till then manifestations of syphilis so benign that this disease has passed absolutely unperceived by them. Therefore it will not do to depend altogether on the more or less tardy appearance of the secondary symptoms and their benignity, and abandon the specific medication, and in directing this treatment one ought to think, not so much of the manifestations he has before his eyes, as of those which are likely to appear in the future.

Finally, to terminate these general considerations on the treatment of syphilis, a question remains to be answered: Does the specific treatment cure all the manifestations of venereal disease? Unhappily, no; there is a malignant syphilis with galloping march, of ulcerous form, which resists the best directed specific treatment. Nevertheless these cases are exceptional today; thanks to the hypodermic method we can master the greater number of specific accidents. It is well understood that this treatment will not repair the loss inflicted on the tissues by the presence of certain syphilitic neoplasms, like gummata, and when these have invaded a part of the cerebro-spinal medulla, the lungs, the liver, the pharynx, etc., the specific treatment will be powerless to restore the parts thus destroyed.

These points being duly established, we pass to the study of the syphilitic patient, and we will follow, step by step in their progress, the several manifestations of syphilis. Let us commence by the chancre.

The nature of the chancre being once determined, can we, by cauterization or by excision, prevent the system from undergoing the syphilitic infection and its consequences? Such is the first question we have to solve. From data furnished by the test experiments of Sigmund, Chadzynski Auspitz, and Mauriac, we are warranted in affirming that the most energetic cauterization and even excision made during the first days of the chancre, and before the propagation of this induration to the neighboring glands, does not prevent the development of the secondary symptoms. I am well aware, according to the statistics to which I have re-

[1] Stades de désaccoutumance. Fournier, Leçons cliniques sur la Syphilis. 2d ed. Paris, 1881.

ferred, that successes have been claimed by both cauterization and by excision, but as the failures have always exceeded the successes, it may well be asked if, in the latter cases, an error of diagnosis was not committed? I believe, then, that this question of the excision of the chancre or its thorough cauterization demands new investigation before such treatment can be regarded as efficacious.

The treatment of the syphilitic chancre then consists in local means which have for their object to hasten the cicatrization of the sore; a curative process which, by the way, goes on normally with considerable rapidity. Pomades of calomel and cold cream (one part to four); lotions of chloral (half per cent.); light touches with lunar caustic, and, above all, special care about cleanliness, suffice generally to hasten the cure of the primitive lesion. Whenever the sore becomes deep and anfractuous, and presents a sanious and malignant aspect, you can employ tincture of iodine, or, what is better, iodoform. This latter is veritably a marvellous medicament in the local treatment of syphilis, and since Féréol showed us, in 1868, the happy topical effects of iodoform in chancre, it has daily been put in usage and always with success.

You are well aware that of late years iodoform applications have had a great popularity, and that they occupy to-day the first rank among antiseptic dressings. I know of but one objection to this medicinal agent—its disagreeable odor. Attempts have been made to mask this odor, but none of them have been very successful. It has been employed in pomades, powder, and, better still, in ethereal solution. Berkeley Hill has proposed a very concentrated solution (one part of iodoform to eight of ether). I prefer a very dilute (five per cent.) solution, and I apply it to the genitals by means of a spray atomizer. You can thus cover the most anfractuous parts of the sore with a thin coating of iodoform, and you have often seen in my service the good results which we obtain from these ethereal iodoform sprays in the treatment of venereal sores in the female.

It has been proposed to substitute for iodoform, bisulphide of carbon; but the smell of this compound is quite as disagreeable as that of iodoform, and it is not proved to have any therapeutic advantage over the latter.

When once the chancre is healed, and the roseola makes its appearance, you begin the mercurial treatment, and I have already told you that, in my opinion, the best preparation is the liquor of Van Swieten; and you thus follow the various stages of the disease.

You all know that syphilis evolves by stages presenting characteristic symptoms, and to which has been given the name of secondary period, transition period, and tertiary period. In the secondary period we depend on mercury; in the period of transition we give mercury and iodide of potassium together. A convenient form of administration is the syrup of Gibert, which contains biniodide of mercury with iodide of potassium.

Lastly, in the tertiary period we use iodide of potassium almost exclusively.

There has been much discussion as to the precise time when the iodide should be given. In a recent work, Gougenheim has shown that even in the secondary stages of syphilis iodide of potassium gives good results. Martineau, in opposition to Zeissl, who would give mercury after the iodide, recommends always to precede the iodide treatment by the mercurial, and I believe, judging from my own experience, that his views are sound.

There are certain syphilitic accidents of a stubborn kind encountered in different periods of syphilis, and which resist to a certain extent the mercurial treatment. I refer particularly to the mucous patches that have for their seat the vulva, the pharynx, and even the labial commissure. These patches perpetuate themselves under the least local irritation. As for those of the vulva, you will need to enjoin the utmost care as to cleanliness, and local applications of iodoform and ether, or iodoform ointment, will be required; as for those in the mouth and throat, you must forbid the patient to smoke, and you will have to touch the sores with tincture of iodine or Van Swieten's solution.

The tertiary complications are often very serious, especially when they affect the nervous centres, and urgent measures will be required, such as the administration in large doses of mercury and iodide of potassium. Here we witness the triumph of hypodermic injections of peptonate of mercury, or frictions of mercurial ointment, associated with iodide of potassium; and I know of no more convincing evidence of the efficacy of this kind of treatment than the cures which are obtained in so short a time from cerebral complications so grave that they would have caused the death of the patient in a few days if help had not arrived. Paralytic and meningeal symptoms all disappear as if by enchantment.

When lecturing on the treatment of myelitis, I told you of the difference which exists between the ataxia of syphilitic origin and other affections of the spinal cord due to syphilis; the first being well-nigh incurable, despite the most energetic specific treatment, the second being amenable to such treatment.

Mineral waters have an important place in the treatment of syphilis, and especially the sulphur waters. Numerous discussions have arisen concerning the action of these waters. Some maintain that certain of these waters have anti-syphilitic properties; others that they only make known the fact whether the patient is cured or not of his syphilis; others claim that these waters have only a tonic and stimulant effect. The latter view counts the most adherents, and is undoubtedly the correct view. The favorite resorts for syphilitic patients are the spas of Aulas, Bareges, Luchon, Cauterets, Amelie les-Bains; in a word, the various sulphur springs which abound in the Pyrenees.

I have finished the general treatment of syphilis, but I desire to say a few words about other venereal diseases, viz., the soft chancre and gonorrhœa. Soft chancre requires the same treatment as the infecting chancre. At the same time, under some circumstances, the soft chancre becomes phagedænic, and then it is necessary to employ a very energetic treatment to arrest the spread of the ulceration. Therefore, after failure with perchloride of iron, iodoform, and tincture of iodine, you may have to resort to cauterizations with the hot iron in order to modify the surface of the sore. To all these measures we must add partial baths of 40° C., which, according to Aubert, constitute the most powerful curative agent in simple chancre and its complications. You well

know that the mercurial treatment is contraindicated in phagedæna, and that it is necessary to employ tonics under all their forms.

The treatment of gonorrhœa comprises the treatment of blennorrhagic urethritis, and that of blennorrhagic vaginitis. In the former, several forms are to be distinguished. Either it is a case of acute blennorrhagia, or the disease has become subacute, or has passed on to the chronic stage. In acute blennorrhagia, the most rapidly curative medicine is copaiba. You know that this balsam, which is in reality one of the turpentines, is composed of an essential oil, which is eliminated by the lungs, and a resinous copahivic acid, which is eliminated by the urinary passages, and it is this elimination which is the curative agent in gonorrhœa. But in order to obtain from the copaiba treatment all the benefits which you expect, you must follow certain rules here laid down. Never give copaiba in the first periods of gonorrhœa, when the inflammation is invading the entire urethral mucous membrane, for at this stage it is worse than useless. Rather wait eight, ten, or even twelve days, till this general inflammation has subsided, before giving copaiba. During this period you can give the diuretic infusions, or alkaline solutions, which have a sedative action. Then you can begin with copaiba, which may be given in capsules, dragées, or in some of the numerous anti-blennorrhagic compounds, like the famous potion of Choppart, which contains copaiba with syrup of tolu and essence of peppermint. But in whatever form it may be administered, it is necessary to give it in frequently repeated doses, so that the urine may be always charged with copahivic acid at the time of emission; so when you make use of the capsules, you should order the patient to take six of them a day—one every two hours. You should increase them by one capsule a day till he takes twelve during the twenty-four hours—one capsule every hour during the daytime. This dose should be continued for two days; then you can diminish them by one capsule a day, till the patient comes to take only one in twenty-four hours, at which time the cure ought to be complete.

In subacute urethral blennorrhagia, you can accompany treatment by copaiba with the use of alterative or astringent injections. I assign due weight, Gentlemen, to all the discussions which have arisen relative to the medicinal action of urethral injections, some authorities considering them as beneficial, others as dangerous. I believe that they are both, according to the time when they are employed—dangerous in the inflammatory periods, beneficial in the subacute and chronic stages. You are aware of the multiplicity of these anti-blennorrhagic injections, which may be divided into three groups: first, those that have a modifying action, the type of which are injections containing nitrate of silver; second, astringent injections, such as those of tannin and sulphate of zinc; and, lastly, the parasiticide injections, which are to-day very much in vogue, and although the microbe of blennorrhagia has not been found, it is not the less true that these injections, and in particular those of permanganate of potash, are employed with success in urethritis. I shall only mention the one which I use oftenest myself, of which the formula is as follows:

℞.—Tannin, ... 3 parts.
Glycerine, ... 100 " —M.

In the treatment by urethral injections, it is well to insist upon the directions laid down by Bourgeois. The patient should first be required to urinate; the injection should be retained for several minutes in the urethral canal, and it is necessary that the syringe be in good working order. In my practice, I prefer the syringe of Langlebert. As for chronic gonorrhœa, so-called gleet, it often presents an invincible resistance to every kind of treatment, and nothing is more obstinate than the *goutte militaire*. You must bear in mind that, as pertaining to this incurability, the patient, by his imprudences, plays a more important part even than the disease itself. It is also a noteworthy fact that deep-seated ulcerations or even strictures often keep up this urethral running, and in these cases the use of the sound or of medicated bougies may have a remedial effect.

After the tonic regimen, ferruginous preparations, bromide of potassium, sea-baths, or sulphur waters, will give you more certain curative results than the urethral injections and balsamic preparations, which are here absolutely useless.

I have not spoken to you of the abortive treatment of this disease, and for this reason—I consider it as useless and dangerous. I have been for many years, and am still, physician to a certain association of commercial employés, and I have observed very many cases of gonorrhœa among them, and I have never once witnessed a cure by the injection of strong solutions of nitrate of silver during the first few days of the attack. On the contrary, I have always observed that whenever this treatment was followed, there was an aggravation of the malady. I discard, then, altogether these abortive measures.

The treatment of blennorrhagic vaginitis ought to fulfil the two following conditions: it should modify the surface of the mucous membrane and prevent agglutination of the opposing surfaces. Here vaginal tampons and suppositories are of great utility. Besides the *sachets* and suppositories so generally employed, ointments introduced by special *pomade-depositors*, devised by Terrillon and Auvard, are much in fashion.[1]

Tripier has recommended the employ of clay mixed with glycerine. I myself am in the habit of using a conical wad of finely carded cotton wound rather tightly, having the form of a speculum, which is introduced into the vagina, after being smeared with a suitable pomade.

Apropos of these ointments, there are numerous formulæ, all having for basis substances more or less astringent and antiseptic. Of all these preparations that which seems to me the best, is the mixture proposed by Vidal of Gurgun balsam and lime-water, in the proportion of one part of the former to two of the latter.[2]

[1] The pomade of Terrillon and Auvard is made as follows:
℞.—Tannin, ... 1 part.
Vaseline,
Starch, ... āā 3 parts.—M.
These substances are incorporated into a paste, which is introduced into the vagina by the *pomade-depositor*. This treatment has proved very efficacious.

[2] Gurgun balsam (gurgun oil or wood oil) was first employed, in 1838, in the treatment of gonorrhœa. Vidal employs the following formula:
℞.—Gurgun oil,
Gum arabic, ... āā 1 part
Infus. anisi, ... 10 parts.—M.
Sig.—To be taken in two doses.

When this quantity of lime-water is exceeded, the pomade becomes too thick, and its application on the cone of wadding is rendered more difficult. Using then the preparation above formulated, I smear my tampon with it, and leave it in place in the vagina for twenty-four hours, and I renew this dressing every morning; when removed, the patient should wash out the vagina with a cleansing injection.

Vaginal injections, like urethral injections, require to be taken with certain precautions. The syringe with rubber ball and tubing, called in America the Davidson syringe, is preferable to the hard rubber or glass tubes in common use; or, what is better still in many cases, the fountain syringe with its appurtenances. The terminal canula should give issue to the fluid by lateral orifices.

The formulæ for vaginal injections are too numerous to be mentioned here, and you will find in your special treatises a sufficient number from which to select for any occasion. I shall only refer to chloral injections, which I was the first to recommend. These are now very much in use, and have often a very happy local effect. My usual way of ordering these injections is as follows:

℞.—Hydrate of chloral, . . . 1 part.
Water, ... 10 " —M.

Signa.—Add a tablespoonful of this solution to a quart of cold water for an injection.

Next to these chloral injections, and almost on the same level, I place injections with resorcine. In my study with Callias, of this medicament, I have insisted on the energetic modifying action of this substance on bad ulcerations of the genital organs. Leblond and Fissiaux have just repeated these therapeutical experiments, and with equally good results. I know of but one inconvenience attending these applications of resorcine, it is the high price of the medicament. The injection is made by adding 3ijss of resorcine to a quart of water. Next in importance come the astringent injections, containing tannin, rhatany, oak bark, etc.

I have much more to say respecting the treatment of blennorrhagia, but it is time to bring this long lecture to a close; the indications which I have given will probably meet the greater part of the cases which will occur in your practice.

ORIGINAL ARTICLES.

SUBCUTANEOUS DIVISION OF THE CRUCIAL LIGAMENTS FOR RELIEF OF KNEE ANKYLOSIS.[1]

BY L. McLANE TIFFANY, M.D.,
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IN common with, I expect, many other medical practitioners, I have experienced not infrequently great difficulty in overcoming the deformity and ankylosis remaining after knee-joint inflammation has subsided, and any operative measure which will, in proper cases, lessen this difficulty is worthy of mention. The procedure named in the title of this paper, division of the crucial ligaments, has been made use of by me with great and immediate benefit to my patient; benefit which, in view of the time which has elapsed since the operation, may be confidently expected to be permanent.

It is not unusual, after that variety of knee-joint inflammation which is denominated white swelling has subsided, to find the articulation left in a more or less ankylosed condition, and the head of the tibia resting more behind the femoral condyles than normal, while there is present at the same time rotation of the limb below the knee, so that the toes point outwards too strongly; the inner condyle of the femur also is overprominent; from which combination of circumstances it results that the function of the limb as a weight-bearing organ of progression is seriously impaired. To restore natural shape and usefulness, division of tendons, of extra-articular bands of fascia, of ligaments; forcible extension under anæsthesia of intra-articular adhesions and bands; shampooing; passive motion, etc., are called into requisition, and with excellent effect.

It is sometimes found, however, that the above means fail to bring about the wished for result, and that, notwithstanding our efforts, the joint remains obstinately misshapen, and more or less stiff.

The deformity of the knee under consideration is far more likely to be met with in children than in adults, and after tendons with extra-articular bands have been severed, the question presents itself as to how much power it is proper to exert in order to rupture forcibly any intra-articular adhesions—the doubtful point being whether the adhesions, the epiphyseal joining, or the bone itself will give way soonest. It is customary to break up adhesions and attempt to restore motion to a knee-joint, not only after inflammation has subsided, but a long time after it has subsided, when, therefore, of necessity the articular surfaces of both tibia and femur have become pretty well settled in their vicious relations to each other. This is a condition of affairs to which neighboring soft parts do not fail to accommodate themselves, for it is a well-known fact that ligaments entering into the construction of a joint will, if the bones are placed in an abnormal position, so adapt themselves to the new attitude as finally to hold the bones in their changed relations, as they, the ligaments, were formerly expected to do in the normal.

There is no good cause why the above line of thought should not apply equally well to both intra- and extra-articular ligaments, and fitting the train of reasoning to the knee, it occurred to me some time since that the crucial ligaments had a good deal to do with the characteristic position which a knee having assumed, retains so sturdily after a severe attack of inflammation, and, as both flexion and extension are limited, that division of these two ligaments would not only permit more motion, but also would enable the tibia to glide forward to its proper position in relation with the femur.

Mauriac recommends as a useful potion in gonorrhœa, the following mixture:

℞.—Gurgun oil, ... 16 parts.
Gum arabic, ... 10 "
Syrup acacia, ... 30 "
Peppermint water, ... 50 " —M.

Sig.—To be taken in three doses.

(Leon Duval, On Gurgun Oil, Thèse de Paris, 1877.)

[1] Read before the Baltimore Acad. of Medicine, Jan. 15, 1884.

In November last a case of knee ankylosis fell into my hands, which I was unwilling to excise, owing to the patient's youth, and not being able to straighten without undue violence, I subjected to division of the crucial ligaments.

In deciding whether a distorted knee should be subjected to the above operation, it is necessary, first of all, that inflammation of and about the joint should have long since passed away, otherwise the necessary manipulation may give rise to recurrence of the original trouble, disastrous suppuration, or what not; furthermore, the patient should be in excellent health with the functions of life well performed. The hamstring muscles, lateral ligaments, and any opposing bands of fascia are then to be divided subcutaneously in the usual way. When the tenotomy punctures have healed, extension under anæsthesia is made, and the operator will be able to recognize that the failure of the joint to still further straighten is due to intra-articular bands.

The amount of power which can be exerted to produce extension must depend upon the surgical acumen of the operator, and a rule in pounds can not be laid down; suffice it to say that a point is reached beyond which the exercise of force will be followed by results prejudicial to the patient's welfare, and this point will be reached earlier in those patients with whom the epiphyseal cartilage persists, than in those whose bones are completely ossified, for of course an epiphysis might be wrenched off by too strong manipulation.

Further forcible extension being inexpedient and the deformity continuing, division of the crucial ligaments is indicated and may be done as follows: The patient lies on the back, the affected limb is held steadily in extension so as to render tense the anterior crucial ligament; the tenotome is entered to the inner side of the ligamentum patellæ, a quarter of an inch above the articular surface of the tibia, and carried backwards and outwards so as to pass between the tibial spine and the external condyle of the femur below the ligament (crucial). The flat of the blade is towards the articular surface of the tibia, the back towards the ligamentum patellæ, the edge towards the spine, after entering the joint. The cutting edge of the knife is now to be carried across the joint from side to side, the edge being directed so as to pass over the spine, and divides the anterior crucial ligament just above its attachment to the tibia; the posterior crucial will probably also be divided, but as it lies further from the skin puncture it is well to reverse the edge of the tenotome, without withdrawal, pass it more deeply into the joint, and carry it from the internal to the external condyle, retracing the path already travelled.

Before entering the knife, the skin should be drawn upwards that the wound may be valvular and air less likely to gain admission to the joint. The tenotomy wound is to be treated as usual. If division of the ligaments has been accomplished, the limb can at once be well extended; the tibia is felt to glide forward upon the condyles to occupy almost if not quite the usual situation, the posterior projection disappears, and the eversion of the foot is lessened. A proper retentive apparatus is to be applied—I use plaster of Paris—and the knee held in its new position until all likelihood of inflammation is past, when passive motion is to be commenced. Inasmuch as the affected limb, from long-continued non-use, is usually not well developed, friction, electricity, etc., can be used with advantage.

Certain practical points in the operation described above present themselves and claim attention: one is the depth to which the knife must be entered before attempting to cut the ligaments; this will of course depend upon the size of the knee demanding treatment; the case related hereafter required that the tenotome be entered one inch and three-quarters. Lately, when practising the operation upon an adult male subject in the dissecting-room, I found that the cutting edge of the knife had to be carried two inches and a half below the skin surface before the crucial ligaments could be severed; here, of course, the joint was healthy. It is wise, I think, that the tenotome should have a blade about three inches long, of which not less than one inch should have a cutting edge, the better to divide both ligaments at one time; also a long and slender point is not entirely free from chance of fracture in an ankylosed knee-joint, and it is well to have the end rounded or chisel-shaped with the corners cut off, furnished, however, with a good terminal edge.

CASE.—A. W., female, aged 11 years, came under my care November 12th. She desired to have her left leg rendered more serviceable. At the age of two years she had an inflammation of the left knee, after which the joint remained flexed nearly at a right angle, so that walking on the limb was not possible. She has always used a crutch. Examination shows the leg flexed on the thigh as stated, the inner condyle of the femur very prominent, the foot rotated outwards strongly, and the head of the tibia displaced backwards to a marked degree. The thigh showed a deeply depressed cicatrice presumptively connected with the former knee disease. Both thigh and leg were less developed than upon the right side, owing, perhaps to disuse, perhaps to inflammatory changes in the epiphyseal cartilages. I divided tendons, fascia, etc., and put a splint on the limb until the tenotomy punctures had healed. Extension to a certain point was then possible, but strong resistance was, beyond this, experienced. No tense structures could be felt, and so it was inferred that the crucial ligaments required cutting. This operation was then at once done, after which the limb could be straightened and the tibia-head advanced to its proper position upon the femoral condyles. The puncture was covered with a piece of absorbent cotton, the whole limb enveloped in cotton wadding and encased in a plaster splint. No pain or constitutional disturbance ensued; examination at the end of one week showed the puncture healed. At the end of three weeks, passive motion was commenced, and the patient is now gaining both strength and motion. The tibia has not returned to its former position behind the femur, the sole of the foot rests on the floor, and the limb bears weight.

THE SANITARY CONTROL OF THE FOOD SUPPLY.[1]

BY WILLIAM K. NEWTON, M.D.,
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THERE is no one subject more intimately connected with our every-day life, and about which so much has been written and published the past few years, as the condition of our food supply. The columns of medical, sanitary, and chemical journals, and the reports of State and local boards of health, have been crowded with essays on food adulteration and plans for checking it; and the popular papers have teemed with the horrors of the subject, each trying to vie with the other in furnishing the latest meal of adulterated articles, till, if we believe the sensational stories of these alarmists, we wonder why there are any people left to tell the tale. The amount of evidence bearing on food adulteration at our command to-day is enormous.

First, let us see what is the prevalence and what the proportion of adulterated food, and then note the effect of prosecution and investigation thereon.

As to Continental Europe we can say but little, for the records are so scattered, and the laws so multifarious, that we have but a trifle to offer. In France, to judge from the published reports, chemists note articles as good, bad, passable, not injurious, and injurious. Thus, in March, 1883, out of 1118 articles examined at the Paris laboratory, 271 were returned as good, 231 as passable, 616 as bad, 545 of which were "not injurious," and 71 "injurious." It is difficult to tell just what is meant by these terms, and as we are not informed which are pure and which adulterated, no opinion can be formed. Wines form by far the largest number of articles examined, and, from the report, we judge that the Parisians get very little pure wine. Of 257 samples of milk, 26 are returned as good, 116 as passable, and 115 as bad, but not injurious.

GREAT BRITAIN.

Year.	Number analyzed.	Per cent. adulterated.
1875–6	15,939	18.10.
1877	11,943	17.70.
1878	15,107	16.58.
1879	17,574	17.25.
1880	17,919	17.47.
1881	17,363	16.56.
1882	14,900	16.50.

These totals do not represent foods exclusively, for drugs, wines, spirits, and beer are included; nor do they indicate the state of the food for the whole of Great Britain, for, as before stated, in many parts of the country no work is done under the Act.

It will be seen by glancing at the figures that five years' work, from 1877 to 1882, has only reduced the amount of adulteration 1.2 per cent. When it is remembered that a vigorous prosecution has been kept up, we are compelled to acknowledge that the results are not very encouraging.

Selecting a few articles from the list for purposes of comparison, we find that of the samples of milk analyzed the per cent. adulterated varied from 26 in 1877, to 20.35 in 1882. Butter, including oleomargarine sold for butter, 12 to 15 per cent.; groceries, 13 to 10 per cent.; bread and flour, 6.34 to 4.32 per cent. Canada shows by far the best results obtained by any country, and the reduction in the amount of adulteration has been made by but little prosecution; the only form of punishment indulged in is the publication of the names of the dealers in impure articles. In 1876, when the work was begun, 51.66 per cent. of the articles examined were adulterated; in 1882 this figure is reduced to 25.66, showing an improvement of a little over 25 per cent.

As there has been little or no prosecution in the United States under the food laws, but little can be recorded as having been done in the way of a reduction of the percentage of adulteration. In New York and other cities, and in New Jersey, the sale of impure milk has been markedly reduced, but there is still much work to do. If we look over the reports of the analysts of New York, New Jersey, Massachusetts, Michigan and other States, we obtain a fair idea of the prevalence of sophistication in this country. We find that the staple articles, such as are used in the average household, suffer adulteration about as follows: Spices and condiments, 66 per cent.; ground coffee, 45 per cent.; tea, 43 per cent.; sugar, the higher grades rarely, the lower grades 20 per cent.; syrup, 50 per cent.; milk, when not inspected, 50 per cent.; flour, none; bread, about 2 per cent.; cream of tartar and baking powders, 44 per cent.; butter, 40 per cent. (other fats substituted); vinegar, seldom adulterated, but rarely cider vinegar; olive oil, 60 per cent.

Spices and condiments are adulterated with exhausted spices, ground cereals, flour, buckwheat hulls; coffee with chicory, rye, and other cereals; tea with exhausted leaves, leaves of other plants, damaged teas, coated to improve looks; sugar with grape sugar; syrup with grape sugar, in many cases all glucose; milk with water, alkaline salts to neutralize acidity, preservatives, and is often skimmed; bread, alum added to increase whiteness, rarely used in this country; cream of tartar and baking powders, gypsum, starches, and "fillers," to increase bulk; butter, other fats substituted for it and adulterated with foreign fats; vinegar, rarely adulterated, but often not fruit vinegar; olive oil, peanut and cotton-seed oil.

It will be noted, after glancing over this list, that the simple articles in every-day use are never adulterated with injurious substances, and the evidence thus far offered indorses the statement made in the first part of this paper, that adulteration is a sin against the pocket and extremely rarely against health.

A group of substances which may be classed together and which, strictly speaking, are not adulterations, but are often used for the purpose of sophistication, will now be considered.

Oleomargarine.—It is difficult to say whether this may be put in the category of articles to be placed under the watch-care of sanitary officials. Some

[1] Condensed from a paper read before the American Public Health Association at Detroit, November 14, 1883.

have held that there is danger of animal parasites or diseases being introduced into the economy by the use of this article, but the best authorities deny this statement. Personally, I am of the opinion that it should be classed with the commercial frauds, but that its manufacture should be watched carefully by health officers. You are so familiar with the process of manufacture that it does not seem necessary for me to go into detail. Suffice it to say, that the aim of the maker is to produce a sweet and merchantable article, as any rancidity would interfere with its sale. This fact insures the public against any putrid or ill-smelling fat being used. The quantity of this material sold and used as food in the United States is enormous. We may form an idea of the extent of the business when we know that three factories in New York State turn out not less than 4500 tons a year, and there are some five or six more factories in the country. I venture to state that a very small portion of this is sold to the consumer for what it really is.

We must recognize the necessity for some legal control over this trade, and dealers should be compelled to sell the article on its merits, and not fraudulently. The enforcement of such a law does not belong to health boards, however.

"Lard Cheese" and "Lardine."—An ingenious New Yorker has discovered that he can take milk robbed of its cream, and by the introduction of a foreign fat produce a cheese equal to an honest cream cheese. Lard and oleomargarine oil have been used in this process, and the resulting material is known as "lard cheese."

"Lardine" is an artificial butter made in nearly the same way. Now, if these articles were sold to the public on their true merits, no one would complain; but such is rarely the case, and if persons are thus defrauded, it may be argued that legal protection to the innocent purchaser is demanded.

Glucose (*Grape Sugar*).—It is estimated that ten pounds of glucose per capita is made and sold each year in the United States; and we naturally ask, What becomes of it? No one ever heard of a person asking for the substance at a grocery store. Yet it is sold and consumed somewhere. We can account for a large percentage of the substance in the syrups, strained honey, confections, and in the lower grades of sugar.

Attempts have been made to check or prohibit the sale of this article, which, as Dr. Squibb has it, "marks the progression of the age." The legislators of New Jersey passed a law in 1881 requiring that the manufacturers of sugar and syrup who shall mix therewith any glucose or grape sugar, must mark the package with the word "adulterated," under a penalty of $500. This law came before Governor Ludlow for his signature, which he refused to affix. His veto message will bear quoting here, for it answers the question as to whether the substance shall be considered as injurious or not. He says: "The manufacture of glucose or corn sugar is an enterprise yet in its infancy; it will, if successful, result in the utilization of the corn crop of the country, the increase of the sugar supply, and the consequent employment of a large amount of capital and labor. Scientists of acknowledged ability and integrity have declared it to be a healthful article of food, and there is no reason why the result of its mixture with cane sugar should be marked 'adulterated,' as if it were a debasement or pollution." The Legislature was satisfied with the Governor's explanation, and did not enact the law.

Frequent statements have been made that the sulphuric acid used in its manufacture has been found in large and poisonous quantities in the glucose syrups. This is either a perversion of facts or an exaggeration. It is true that sulphuric acid is employed in the conversion of starch into grape sugar, but the acid is afterwards neutralized by means of milk of lime. If any acid exists in the syrup, it is either in combination with the lime or free and in very small quantities, a condition strenuously avoided by the manufacturer.

It may be said without fear of contradiction that glucose may be considered a harmless article of food.

As to the use of this article as an adulterant, I hold that it does not come under the jurisdiction of health officers.

Canned Foods.—There is sufficient evidence to warrant us in asserting that fruits, vegetables, and meats preserved in tin need our attention. Many cases of acute poisoning of greater or less severity have been reported by competent observers. It has been proved that some fruits and vegetables act upon the tin or lead, and enough of these metals is dissolved to cause serious illness. This is especially true of the very acid fruits, such as apples, cherries, and vegetables like tomatoes.

One case has come under my notice where two persons were seized with an attack of vomiting, purging, and cramps after the ingestion of apples preserved in tin. I was fortunate enough to obtain the can and the remainder of the fruit. The interior of the can presented a crystalline appearance, such as is described by Wood and others who have investigated the subject. The fruit was acid in reaction, and analysis revealed tin in considerable quantities.

It has been suggested that only old and imperfectly prepared fruits and vegetables cause trouble, and that to insure the freshness of the article the year of canning should be stamped on the package. This subject needs thorough investigation.

As to illness being caused by corned beef and other meats in cans, I can say that I have seen two cases, but the trouble seemed to be due to imperfect preservation, as the meat in both cases was partially rotten. Both cans were what is known in the trade as "swelled-head," that is, the ends of the can bulged out by air or gases in the can; hence these cases cannot be cited as being caused by canned meats by themselves.

Preservatives.—I wish to call attention to the use of preservatives, as the custom seems to be increasing, and the subject should be thoroughly studied before a competent opinion can be formed as to the advisability of their employment. Those which I have examined have consisted of salicylic acid, either alone or combined with soda; alkaline carbonates; potassium nitrate; and borax or boric

acid. These are extensively advertised in glowing language and with the usual accompanying certificates from chemists or physicians, and meet with ready sale. Many fanciful names are given to the compounds, and each is claimed to be "positively harmless."

My own opinion is that their use should be discountenanced by sanitarians, for the mere fact that a certain chemical combination will check fermentation or putrefaction outside of the body, leads us to believe that digestion will be impaired or impeded. This I have sought to prove in an imperfect way by treating milk with a preservative and then attempting artificial digestion. Digestion was proved to be interfered with, or checked altogether.

Thus far we have been discussing certain laws and duties relating to the food supply with which health boards may or may not properly concern themselves. Your attention is now called to a group of foods, and the trades connected therewith, which need the constant surveillance of sanitary officers. I refer to bread, milk, and meat, and the trades of baker, milk-seller, and butcher, each one of which should receive the closest attention of health officers. The importance of this branch of our subject is so evident that I shall go somewhat into detail in pointing out the line of investigation necessary.

Bread.—The amount of adulterated bread sold in the United States is very small, certainly not one per cent. of the quantity used. Alum is sometimes used to make bread appear white, but it is not a common practice. It may, by prolonged use, cause indigestion, and of course its use should be checked. But the health officers' duties do not end with the mere examination of bread for alum; he should carry on his inspection further, and into the bake-shop, notice the condition and surroundings of the place, and insist that there should be cleanliness in every branch of the business.

Bake-shops are usually located in cellars and are very often damp, dirty, and foul-smelling, and if a person with a sensitive stomach should visit many of them, I am of the opinion that the demand for home-made bread would be increased.

The very occupation of baker is apt to cause certain diseases of the skin of the hands, and although no illness may be caused by it, it is not pleasant to think of our bread containing the scales or scabs from eczema.

To give a leaf from the history of a few visits to bake-shops may interest you and impress upon your minds the importance of the sanitary control of such places.

Most of the places visited were damp, dark cellars, where artificial light is constantly used. In one place we found the cat and dog asleep in the kneading-trough, fowls running around and perching on the various utensils, and a general air of filth and lack of thrift. In one shop the kneading-trough was connected with the sewer by means of an untrapped waste-pipe; in another the soil-pipe had burst and the floor was flooded with liquid filth. The baker said that "that always happened after a rain-storm." I have seen a baker mixing his bread with hand and arm covered with the eruption of eczema. He said that "the doctor told him the dough was good for the disease." But we would say that the quality of the bread was not improved thereby.

The custom of using bake-shops for sleeping-rooms is very common and must be discountenanced.

I would insist, then, on the necessity of frequent inspections of bake-houses, in order that their cleanliness should be insured.

Milk.—When we consider that milk is universally used, and that it constitutes almost exclusively the diet of children at that time of life when they are least able to resist any interference with the purity of their food, we are forced to the conclusion that strict measures should be adopted by every health authority to insure that condition of the supply necessary for good health. It is pleasant and encouraging to know that this is acknowledged by most sanitary officers, and that more or less efficient work is done by a great number of health boards to check the sale of impure milk. But the mere inspection of milk for the purpose of detecting adulteration, although most commendable, does not go far enough and is not in itself sufficient. The watchfulness of health officers should go much further and should extend to the dairies from which the supply may come; this I shall insist on, and shall state cogent reasons for demanding it.

We are in a position to state that the adulteration of milk is confined almost exclusively to the addition of water, preservatives and alkalies, and to the abstraction of cream. These adulterants are not in themselves injurious to health, but when we know that the nutrition of an infant is seriously interfered with by the impoverishment of the milk given it, we see wherein harm may be done.

Beside checking the sale of adulterated and impoverished milk, the inspector should be on the lookout for milk from dangerous sources, some of which I shall now indicate.

Milk produced by improper feeding: Distillery waste, and sometimes beer grains, produce a quality of milk of low nutritive powers and dangerous to infants.

Colostrum: The milk from cows soon after calving should not be sold. It has often produced intestinal troubles in children.

Cattle improperly cared for: Cattle improperly housed and cared for, especially those kept in cities, need close watching, and the stables should be frequently inspected.

Milk from diseased cattle: Milk from diseased cows is especially dangerous, and we may assert that the use of this article from tuberculous cows is very hazardous. Sufficient evidence has been offered by good and careful authorities to prove that there is a possibility of the transmission of tuberculosis by means of the milk, and phthisis is quite a common disease among milch cows when crowded in ill-ventilated stables. Fortunately, the secretion of milk is checked during many of the acute cattle diseases, but there is the risk of carelessness on the part of dairymen; hence inspectors should be always on the alert.

Finally, there is the great danger of the transmission of contagious diseases—the milk acting as the carrier. This fact has been carefully noted in England, and many epidemics of typhoid fever, scarlet fever, and diphtheria have been traced to the dairyman's house.

Mr. Ernest Hart, of London, has epitomized about all that is known on this subject in an article read by him before the International Medical Congress in 1881. He sums up as follows:

"The number of epidemics of typhoid fever recorded in the abstract as due to milk is 50; of scarlatina, 15; of diphtheria, 7. The total number of cases occurring during the epidemics traced to the use of infected milk may be recorded in round numbers as 3500 of typhoid fever, 800 of scarlet fever, and 500 of diphtheria. When it is remembered that barely ten years ago we were utterly ignorant of milk being a carrier of infection, and that consequently these epidemics have all occurred within one short decade, it will be seen how vitally important is the safe guarding of our milk supplies from contamination."

The number of *The Lancet* for October, 1883, No. 33, p. 652, records an epidemic of typhoid fever at St. Pancras, the details of the investigation being given by Mr. Murphy, Medical Officer. There were 431 cases in 276 houses, and 220 cases were traced back to a dairy which supplied most of the houses with milk.

We can easily account for the method of transmission in many cases. Thus, a can of milk—a fluid especially apt to absorb, and take up impurities from the surrounding air—may have been exposed to the emanations from a case of scarlet fever, or the can wiped out with a soiled towel or cloth from the patient. The cases of typhoid fever traced to dairies have, as a rule, been accounted for by the contaminated water which has been used to dilute the milk or wash out the cans.

That the causes of the epidemics of some zymotic diseases have not been traced out in this country, is probably due to want of care on the part of our sanitary officials.

I shall ask you now to consider a plan for a control of the milk supply, which I think should be followed by all sanitary officials. A registry of the milk-dealers should be kept, backed up by the law, if necessary, and this should include the name of the dealer, the location of the farm, the amount of milk sold daily, and after inspection of the farm and the milk, notes should be added as to the quality of the milk, the condition of the farm-yards and the cattle, the breed of the herd, and the kind, quality, and quantity of feed given. If this plan is followed out, it will not be long before a complete sanitary control can be kept over the milk supply. We are working on this plan in Paterson, but it is too early to arrive at results. So far it has worked well.

Meat Supply.—Most of our larger cities provide for meat inspection in their markets, but it begins and ends with the inspection of the meat actually exposed for sale, and as a rule only meagre, putrid, and immature meat is condemned. This system is defective in that it does not provide for the surveillance of slaughter houses, and the examination of all cattle before or immediately after killing, and before the meat is offered for sale. In many of our cities the cattle are brought to the butcher by railroad after a long journey; they arrive in an exhausted and feverish condition, and are not fit to be used as food. In our smaller towns and villages, only the very young or very old cattle are slaughtered for local use. Not only are the cattle actually diseased at the time of killing, but the meat itself, by improper treatment, may act as a home for dangerous germs. Mr. Francis Vacher, of Birkenhead, in an able paper read before the International Medical Congress, refers to several ways in which meat might spread diseases, thus, it might itself be in a pathological condition, or serve as a medium in which disease germs were nourished and multiplied, or it might serve as a nidus in which such germs rested. Thus, a specific disease may be communicated to man by the ingestion of meat tainted with splenic fever, or foot-and-mouth disease, or from a tuberculous animal.

We are warranted, then, in claiming that meat inspection should include an examination made by competent persons before death, or, before the meat shall be exposed for sale in the markets; this plan may require the services of a skilled veterinarian, but it seems to me essential.

As many of our towns are now supplied almost entirely with meat killed and dressed in the West, and brought to market in refrigerator cars, this system of inspection will perhaps have to be followed by officials appointed by the general government, for it would not be equitable to burden a city with work which does not concern it.

A CASE OF PAGET'S DISEASE OF THE NIPPLE AND AREOLA.

By G. E. DE SCHWEINITZ, M.D.

In 1874, Sir James Paget published his now wellnigh classical paper, "On Disease of the Mammary Areola preceding Cancer." Since that time numerous publications upon the subject have appeared, especially abroad, but also to a lesser extent in this country. The affection, variously designated as "Eczema of the nipple and areola," "Paget's disease of the nipple," and more recently "Malignant papillary dermatitis," has been the subject of clinical study by Morris, Lawson, Napier, Heywood Smith, Forrest, Munro, McNaughton Jones, Savory, Chambers, Welply in Great Britain, Busch in Germany, and C. B. Porter, Sherwell, S. W. Gross, and Duhring in this country. The pathological histology of the disease has been especially investigated by Mr. Butlin, Dr. Thin, Dr. Goodhardt abroad, and by Dr. Cabot in this country.

It is the object of this paper to place another instance upon record, for, as is justly remarked by Dr. Thin, "opinions regarding the exact nature of this class of cases will probably vary considerably until full details regarding a considerable number of them have been published." The patient whose case

forms the subject of the present sketch was under the care of Prof. John Ashhurst, in the University Hospital, and it was by his kind permission that I was permitted to examine the diseased nipple and areola, together with the cancerous breast which lay beneath them.

Mrs. B., aged 52, married, and the mother of children. Her father and mother were killed by an accident; of the two brothers and two sisters who formed the remainder of the family, all are living and healthy. She has no knowledge of her grandparents. Her own health has usually been good. Six years ago she fell from a step-ladder and considerably bruised the right breast and right side of the body, and was troubled for some time afterwards with shooting pains in this region. About six months after the accident, she noticed a crust forming upon the nipple, which constantly reformed after removal. This crust grew larger and spread gradually to the areola, while the nipple began to retract. A little more than a year ago she first began to perceive that a lump was forming in the breast, and that for three months preceding its appearance there were marked increase and extension of the disease of the nipple and areola.

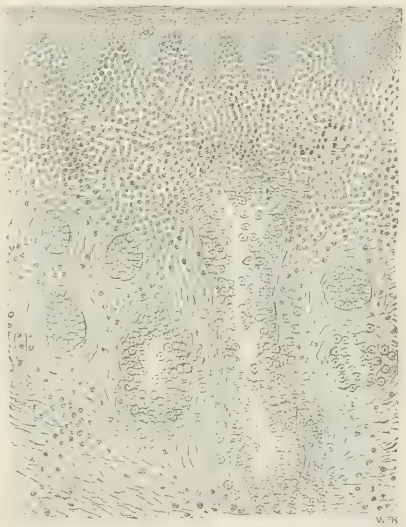
Such is the history obtained from the woman at the time she presented herself for operation. The gross appearances of the breast at this time were as follows: The gland was enlarged and thickened, and its weight markedly increased. The nipple was completely retracted, and the areola and the skin around it, over an irregularly oblong patch about three inches by two inches in extent, of a deep-red color, with a peculiar glossy appearance, which fully justified Sir James Paget's description of these cases in its resemblance to the glans penis when affected by acute balanitis. The subcutaneous veins over the upper part of the breast were enlarged. The axillary glands were involved to a moderate extent.[1]

Microscopic Appearances.—The epidermis, especially that overlying the nipple and areola, was much changed and at times disintegrated. Here and there narrow strips of the horny layer remained, but in some places it had entirely disappeared. The outlines of the rete mucosum were often but poorly defined between the remnants of the horny layer above and the dense small-cell infiltration below, and in spots its entire absence was noted, allowing the papillary layer of the cutis to stand out in small finger-like prolongations from the edge of the section. This latter fact, however, was probably due to faulty preparation or careless handling of the section.

In the more diseased parts, changes of a retrograde nature were visible; viz., swelling of the nucleus, its disappearance, and the vacuolated cell-substance as it has already been described by Dr. Thin. The mucous layer of the epidermis had further undergone proliferation and extension downwards. This appearance was most marked in such sections as included both healthy and diseased tissue, where the descent of the rete, as it were, showed in marked contrast to its normal outlines and thickness in the healthy portion. In some sections there were present a few cell-nests, giving the appearance of an epithelioma, a condition also noted by Mr. Butlin; but as this only occurred in those cuts which were made transversely or obliquely, I think it not improbable that they were due to the method of cutting the sections, for precisely similar appearances can be obtained by making similar sections of healthy skin.

The corium, and to a less extent the subcutaneous tissue, was densely infiltrated with small round cells (leucocytes). So dense was this infiltration, that in the upper parts of the corium, in the immediate neighborhood of the nipple, it entirely substituted the normally present tissue. The papillary layer of the cutis, while it was in no instance entirely destroyed, was displaced, as it were, by this small round-cell infiltration. The disposition of these cells was at times peculiar, being often uniform, sometimes gathered together in round nest-like masses separated by intervals of non-infiltrated tissue, and here and there they were crossed by spindle-cells and fibre-cells, giving somewhat the appearance of young cicatricial tissue. Passing to the deeper layers of the corium (pars reticularis) and the subcutaneous tissue, here also the round cells were present to a less degree than above. Even in the subcutaneous tissue now and then an

FIG. 1.

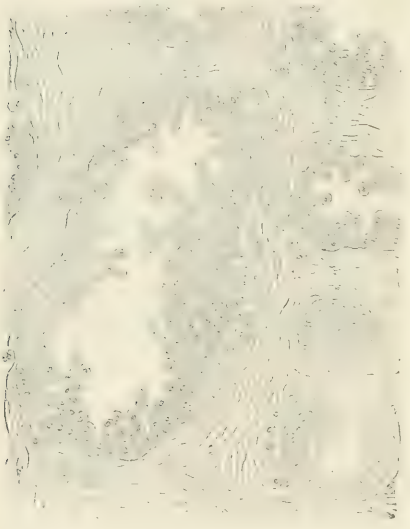


Section through the nipple, showing infiltration of the cutis. Dilated ducts with their epithelium proliferating are also seen. The epidermis is partly diagrammatic, and does not represent its appearance as described in the text.

[1] A chromo-lithograph of this case is to be seen in the International Encyclopedia of Surgery, vol. iv. p. 634.

isolated mass of round cells similar to the ones just described was noted, and usually in intimate relationship to a bloodvessel. The bloodvessels of the corium were numerous and often dilated. The small round cells are no doubt for the most part emigration corpuscles, and not, I think, as has been suggested, derived from a disintegration of the cells of the rete and an escape of their nuclei. The most prominent features of the subcutaneous tissue were the distention of the lymph-spaces, and the fact that they were in many places filled with epithelial cells; together producing a picture quite indistinguishable from any section of ordinary spheroidal-celled carcinoma. This arrangement could be seen not only in the deeper layers of the subcutaneous connective tissue, but also higher up, where it joined the lower layer of the corium, and even up into this tissue almost to its union with the epidermis. Examination of the lactiferous ducts revealed their epithelium in a high state of proliferation, and no longer of the shape natural to the part. The proliferating epithelium was often seen escaping from the ducts and pouring out into the surrounding connective tissue, and here arranging itself in the spaces before

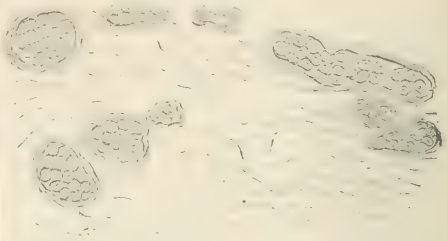
FIG. 2.



Cross section of the nipple, showing the dilated ducts with proliferating epithelium pouring out into connective tissue, and arranging itself in the spaces.

described. This choking up of the lumen of the ducts and proliferation of their epithelium, could be traced from their outlets downwards into the hardened nodules of the breast. Sections of these nodules showed the following structure: In the younger parts the acini were dilated and gradually filling with epithelium Finally they coalesced and formed a large carcinomatous alveolus. Alveoli of this nature having become superdistended with epithelium, the epithelium escaped into the connective tissue and new cancer cylinders were thus formed, lying in the distended connective-tissue spaces, precisely as had occurred in the nipple.

FIG. 3.



Nests of spheroidal epithelial cells from the nodules of the breast tumor.

The type and character of the epithelium were preserved throughout; spheroidal-shaped cells with outlines more or less perfectly defined and small nuclei.

The following propositions represent a brief recapitulation of the more important points in the foregoing description:

1. A dermatitis characterized by a proliferation, and at times degeneration of the mucous layer of the skin, and a dense small round-cell infiltration especially of the upper part of the cutis, substituting the normally present tissue of the papillary layer.

2. Proliferation of the epithelium of the galactophorous ducts and its passage out into the surrounding connective tissue of the nipple.

3. Distention of the lymph-spaces of the subcutaneous connective and their occupancy by epithelial cells similar in character to those found in the distended ducts.

4. A similar epithelial proliferation in the gland-tissue of the breast, and the formation of a spheroidal-celled carcinoma.

From this *résumé* it will be seen that these observations are of interest because they go to confirm similar facts noted by other investigators. The question whether this dermatitis is the primary disease or whether it is produced, as Dr. Thin suggests, "by a destroying agent which extends from the mouths of the lactiferous ducts into the surrounding papillary layer," the poison being the cancerous epithelium of these ducts as distinguished from their normal epithelium, is still an open one. The clinical history of this case, which shows that the disease of the areola and nipple existed for nearly five years before the appearance of the tumor of the breast, would rather, I think, incline to the correctness of the former view, although Dr. Thin does not believe this objection to his view to be a valid one. Certainly this case, taken in connection with

other reported cases, would indicate the correctness of the following propositions:

1. The malignancy or malignant tendency of the disease.

2. The tendency of the changed epithelium of the ducts to travel downward and produce carcinoma of the breast.

3. The propriety of excising a breast thus affected before any tumor of the gland tissue itself can be detected.

The following references to the literature of the subject may be of interest:

Sir James Paget: St. Barthol. Hosp. Reports, vol. x., 1874, p. 87; and vol. xiv., 1878, p. 87. *Butlin:* Medico-Chirurg. Trans., vol. lix., 1876, p. 107; and vol. lx., 1877, p. 153. *Morris:* Medico-Chirurg. Trans., vol. lxiii. p. 38; Ibid., p. 44. *Lawson:* Clinical Trans., vol. xiii. p. 37. *Thin:* Path. Soc. Trans., vol. xxxii. p. 218; British Med. Journal, May 14, 1881; Ibid., May 21, 1881; Lancet, vol. i., 1881, p. 458. *Chambers:* Lancet, 1879, vol. ii. p. 743. *Savory:* British Med. Journal, Dec. 15, 1877. *Welply:* Ibid., 1880, vol. i. p. 555. *Napier:* Glasgow Med. Journal, Sept. 1882, vol. xviii. *Heywood Smith:* Lancet, 1882, vol. i. p. 684. *Forrest:* Glasgow Med. Journal, 1880, vol. xiv. p. 457. *Munro:* Ibid., 1881, vol. xvi. p. 342. *McNaughton Jones:* Path. Soc. Trans., vol. xxxii. p. 242. *Porter:* Boston Med. and Surg. Journal, May 4, 1882. *Gross, S. W.:* Tumors of Mammary Gland, p. 28; Phila. Med. Times, July 5, 1879, p. 486. *Duhring:* American Journal of Med. Sciences, July, 1883, p. 116. *Sherwell:* Trans. of Dermatological Association for 1883; Phila. Med. Times, Sept. 8, 1883. *Von Busch, W.:* Langenbeck's Archiv Bd. xxi. S. 673.

MEDICAL PROGRESS.

Inhalations of Carbonic Acid in Whooping-cough.—M. Campardon has recently experimented with this treatment in the case of a child of ten years of age, sick for five months. The carbonic acid gas used was obtained from an apparatus for making seltzer-water, and was slowly inhaled through a rubber tube placed at the nasal orifices. After a few inhalations the cure was complete. M. Campardon insists that the gas should always be charged with vapor of water. The method is very cheap, and may be commonly used on this account.

M. Constantin Paul employs this gas in his service to give relief from the pains accompanying certain affections of the respiratory apparatus, particularly tuberculous laryngitis. He obtains a very prompt and marked relief.

M. Moutard-Martin advises compressed air in pertussis. It does not cure the disease, but it diminishes the number of paroxysms, and this diminution enables the patient to take food more readily.

M. Dujardin-Beaumetz states that while the actions of compressed air and carbonic acid gas are entirely different, the effects are very similar. Compressed air acts like oxygen, by controlling vomiting; the carbonic acid gas acts as an analgesic, suppressing the laryngeal reflex which brings on the paroxysms.—*Revue de Thérap.*, December 15, 1883.

Intestinal Tuberculosis from Swallowing Tuberculous Sputa.—Mosler reports the case of an almost idiotic patient, who insisted on swallowing his sputum. Two days after the commencement of an attack of specific bronchitis he began to have diarrhœa and an intestinal colic, which continued until his death, about the eighth day. Tubercles were found in the lungs; of the other organs only the intestines were affected, the jejunum being most markedly tuberculous.

Mosler attributes the intestinal tuberculosis to the fact that the sputa were swallowed. He has not been able to verify this by experiments on animals, but he has caused violent inflammation of the stomach and small intestine by feeding them with tuberculous sputa and masses.—*Journ. de Méd. de Paris*, December 22, 1883.

Alimentation by Meat-juice.—At a recent meeting of the Société de Thérapeutique, M. Brame read a note on the preparation and use of meat-juice flavored with orange-flower water.

M. Dujardin-Beaumetz gave the following as a method for disguising the disagreeable odor and taste of powdered meat: Two ladlefuls of meat-powder and the same quantity of syrup of punch are thoroughly mixed, when a variable quantity of cold milk is added, according as the patient desires a more or less liquid preparation. When the taste of rum becomes disagreeable, syrup of wild cherry may be added.

M. Blachez thinks that meat-juice contains only a small quantity of the active substances of the meat. When meat-powder cannot be obtained, crude meat may be substituted for it; this may be prepared so as to do away with all disagreeable qualities. It should be chopped finely, the pieces rolled in flour, and then butter is added; these pieces are then thrown into the soup.

M. Catillon recommends the addition of Madeira wine to the powdered meat, especially if it is desirable that only a small quantity of alcohol be given to the patient.—*Revue de Thérap.*, December 15, 1883.

The Presence of Phthisis in Prisoners.—Whilst the mortality in the Prussian prisons in 1878–79 and 1880–81 averaged 30.6 per cent.—amongst a people in good hygienic circumstances—there was an average death-rate in Prussia in 1876–1880 of 25.5 per 1000. Among the people of the mountainous districts the average was 10.54 per 1000, and amongst inhabitants of the lower country 21.4 per 1000. Of all diseases, phthisis occupied the first place; so that the death-rate of phthisis amounted to 40 or 50 per cent. of the whole number of deaths. In the majority of cases the phthisis was acquired in the prisons. As a cause for this, the insufficiency of disinfection stands first. Prominent, also, as a cause, is the custom of putting prisoners together in sleep- and work-rooms.

The excessive mortality of phthisis must be accounted for by the universal presence of the bacilli or their transportation by articles of clothing; the prison life is also favorable to the development of the bacilli, on account of the lowering of the vital forces.—*Centralbl. f. klin. Med.*, December 8, 1883.

HYDATID CYSTS OF THE ORBIT.—M. Chauvel recently read before the Société de Chirurgie a report on a paper by M. DIEU relative to the history of this affection. The paper is based on one personal observation.

The patient was an Arab woman, who had had exophthalmia for a year. The eye was immovable, and looked upward and outward. Vision was abolished, and there was intense venous congestion of the papilla. Puncture of the eye gave issue to a clear liquid, vision was reëstablished, and the patient left the hospital, but the strabismus continued, and atrophy of the papilla having ensued, vision was lost.

M. Dieu draws the following conclusions: Hydatid cysts of the orbit are analogous to those of other regions, and the hooklets are easily found in the liquid.

They are more frequent in males than in females, the proportion of collected cases being eighteen to six.

Two-thirds of all cases have occurred before the age of twenty-one years.

The symptoms are the same as those of encysted tumors. The pains may be very acute, and the symptoms of surrounding inflammation more pronounced than with other benign tumors.

The course of the affection is generally slow, though sometimes it is rapid.

The diagnosis is established by palpation, when the cyst is accessible, by exploratory puncture and chemical and microscopical examination of the liquid.

The prognosis is serious; for, after operation, the eye has been lost six times, and vision has been lost or diminished in twelve cases. Of twenty-six cases there were two deaths. The treatment consists in puncture, followed by incision, and drainage.—*Revue de Thérap.*, December 15, 1883.

ADENOID VEGETATIONS OF THE PHARYNX.—DR. K. DÉHIO concludes an article on this subject as follows:

1. The adenoid vegetations which are frequently developed in the naso-pharyngeal cavity of a child are shown externally by the peculiar appearance of the face; this peculiarity consists in permanent opening of the buccal cavity, lengthening of the face, feebleness of the jaws, projection of the cheek bones, and projection forward of the superior maxillary region.

2. Anatomically, this modification consists essentially in a deformity of the superior maxilla. This bone is flattened transversely in its buccal part. The alveolodental curve is deformed both in its form and dimensions. The lateral parts are sometimes diminished to one-half their transverse diameter. *Per contra*, the depth of the palatine vault is increased. In this way, the vault is narrowed and deepened.

3. The teeth, on the contrary, preserve their volume, and in this manner they are ranged irregularly before and behind the dental arch. More often they project forward, *en masse*, producing a considerable projection of the whole anterior range, so that the front teeth project over the lower lip.

4. This peculiar conformation of the palatine vault and the dental arch has been variously interpreted. An ethnological signification has been generally given to it, some authorities regarding it as evidence of superiority, others of inferiority of race.—*Revue de Laryngol., d' Otol. et de Rhinol.*, December 1, 1883.

VERATRINE IN TREMBLING.—M. BAZILE FÉRIS has used veratrine in some cases of trembling, and has obtained excellent results. He has used it in thirteen cases; six being of alcoholic origin, two came on after typhoid fever, and one was due to sclerosis *en plaques*. All patients were rapidly relieved of the disagreeable symptoms.

Féris ordinarily gives veratrine in pills containing gr. $\frac{1}{130}$ each, the dose being four pills, to be taken during the day. From his results he draws the following conclusions: Trembling dependent upon alcoholism, or upon affections of the nervous system, or consecutive to pyrexiæ, disappears under the veratrine treatment. The action of the drug is almost instantaneous, but the administration should be kept up for some time after the trembling has disappeared.—*Journ. de Méd. de Paris*, Dec. 8, 1883.

INJECTION OF TINCTURE OF IODINE INTO OVARIAN CYSTS.—CANTIERI has adopted this method in two cases, with good results.

Commencing at the superior part of the cyst, he inserted the needle of a Pravaz canula, and injected half a canulaful of tincture of iodine, this being repeated from four to eight times, at intervals, until the lower portion of the cyst was reached. In neither of the two cases was there collapse, intoxication, or inflammation, and there was only slight fever. The size of the tumor greatly diminished. In cases of multilocular cysts, the injections should be multiple.—*L' Imparziale*, Dec. 1883.

TEARS OF BLOOD.—This rare phenomenon, the reality of which has often been doubted, seems however, to occur under certain circumstances. Damalix has published an interesting paper on this subject in the *Archives d' Ophthalmologie*. He was led to study it by the observation of a case in M. Panas's wards. The patient, a young, hysterical girl, said that she had often noticed a flow of blood from her eyes, and spots of blood on her handkerchief after wiping them. For some time the hemorrhage occurred every night. A careful examination of the eyes showed nothing abnormal, but there were photophobia, facial neuralgia, and considerable blepharospasm. This case, as M. Damalix himself says, cannot be considered as conclusive, in spite of the probable veracity of the girl and her parents, as the hemorrhage was never seen by him. But there are on record some observations which do not leave room for doubt. In a case of Hauser, and in another of M. Brun, the observer could actually see the blood flowing from the eyes like tears; there was no possibility of trickery, and microscopical examination of the fluid showed that it was really blood. As for the diagnosis, the name blood-tears must not be applied to the various forms of hemorrhage caused by some organic lesion of the mucous membrane, such as small polypi, etc. The true form has nothing to do with any visible lesion, and the course of the accidents is remarkably irregular. Sometimes there are no premonitory signs, the blood appearing without effort or pain; in other cases, the patient feels for some time pain in the forehead, or at the root of the nose, or, it may be, a feeling of tickling and heat in the lids, which disappears when the blood begins to flow. The amount of blood lost varies from a few drops to a wineglassful; the flow never lasts more than

a few minutes, is always intermittent, and generally coincides with other hemorrhages in the skin or mucous membranes, or, on the contrary, with *suppressio mensium*. A study of the etiology of the disease shows that it is most frequent in hysterical women suffering from anæmia or hæmophilia.—*British Med. Journ.*, Dec. 8, 1883.

The Treatment of Leukæmia, Pseudo-leukæmia, and Progressive Pernicious Anæmia by Arsenic.—Dr. Warfvinge, of Stockholm, reports eleven cases of progressive pernicious anæmia, as many of pseudo-leukæmia, and two cases of leukæmia treated at the Sablatsberg Hospital. The two cases of leukæmia and seven of pseudo-leukæmia and progressive anæmia were put on arsenic treatment.

The first case of leukæmia was apparently completely cured after three months' treatment by arsenic; there had been a great deal of lymphatic enlargement, but the glands returned to their normal volume, and the blood-globules increased to the normal number. The second case of leukæmia was in a very advanced stage, the spleen being enormously enlarged, and there were an equal number of white and red corpuscles. After twelve weeks of arsenic treatment, the volume of the spleen was considerably diminished, and the ratio of the white to the red globules had fallen to 1 : 14; the general health being also much better. During the course of the treatment several hypodermatic injections of Fowler's solution were made.

As to the cases of pseudo-leukæmia, the treatment was without effect in two, but gave the best results in the other five cases. In one case, of lymphatic form, the cachexia and marasmus attained a marked degree in spite of the administration of the iodide of iron; but after five weeks of arsenic treatment, the amelioration was very marked. In another case, of lymphatic form, the arsenic evidently acted in reducing the size of the ganglia, but the patient died of asthma, caused probably by pressure of the enlarged ganglia of the mediastinum. Two other cases left the hospital with all the signs of health, and a fifth was very much better.

The cases of progressive pernicious anæmia were always ameliorated, and sometimes cured. Treatment by arsenic was only begun after a long and fruitless trial with iron and tonics. Amelioration was manifest after a short time, and the quantity of red blood-corpuscles was sensibly and rapidly increased. In some cases there was a relapse, followed by the death of the patient. —*Centralbl. f. gesammt. Therap.*, No. ix., 1883.

Extirpation of the Larynx and Thyroid Gland.—Dr. Novaro performed this operation at the Ospitale S. Giovanni, in Turin, on October 1st. The patient was a male, æt. 54 years. The operation was performed on account of epithelioma involving the larynx, thyroid body, and a part of the wall of the pharynx, the latter being also excised. The patient died of pneumonia a month after the operation.—*Gaz. degli Ospitali*, Dec. 9, 1883.

First Lung Resection in Italy.—Ruggi recently performed this operation on a woman æt. 30, who had phthisical cavities in the upper lobe of the right lung. She also had fungous arthritis of the knee-joint. The second and third ribs were resected, with their cartilages, for about two and four-fifths inches; the pleura was opened and separated from the lung, without any respiratory or circulatory troubles. The whole of the upper right lobe was removed by means of Billroth's pincers. The temperature and respiration became normal after six hours. The patient died on the ninth day of carbolic acid poisoning.

Mosler, in commenting upon this case, declares that while traumatism, bronchiectatic caverns, and gangrene may be legitimate excuses for this operation, tuberculosis is not.—*Centralbl. f. klin. Med.*, Dec. 1, 1883.

Scleroderma.—At the close of an article on scleroderma in the adult, Dr. Giorgio Nicolich draws the following conclusions:

Scleroderma is a special inflammation of the skin and subcutaneous connective tissue, which at times affects the mucous membrane of the mouth and vagina. Its course is very slow, the initial symptom being hyperplasia; the final, atrophy of the affected part. It is in all probability secondary to neurotrophic alterations.

The disease may affect the skin of the whole body, but more often that of the upper half. Females are more disposed to the disease, and it is principally observed between the ages of twenty and thirty years.

The most frequent cause is the action of cold on the sweating skin, or simply catching cold. Cure is possible only in the first stage of the disease, though notable amelioration can be obtained in the second stage. Massage and electricity give the best results.—*Lo Sperimentale*, October, 1883.

Turpentine-Iodoform.—De Renzi recommends a solution of iodoform in turpentine as an efficacious inhalant in pulmonary disorders, in phthisis especially. He has used this mixture for some time with very good results. Five or six drops of the solution are used every two hours, placed on a piece of wadding in an inhaler.—*L'Imparziale*, November, 1883.

Nephrectomy.—Dr. N. P. Dandridge, of Cincinnati, reports in *The Cincinnati Lancet and Clinic*, of December 29th, the case of an unmarried female, aged twenty-two, from whom, on November 2d, he extirpated the right kidney by the median incision on account of caseous pyelitis. The patient died the same day.

On June 19, 1883, at the Sussex County Hospital, Brighton, Mr. Jowers extirpated the left kidney, on account of scrofulous degeneration, in a married female aged fifty-five, who suffered from constant dull pain in the abdomen, associated with a hard, movable mass, about the size of a large cocoanut, and frequent attacks of hæmaturia. The operation was performed by the abdominal incision. The patient died on the 21st.

Amyotrophic Lateral Sclerosis.—At a late meeting of the Société de Biologie, M. Marie reported the results of an autopsy made on a woman, in the service of M. Charcot, who had been affected with this disease. The chief fact, of great physiological and clinical interest, consisted in the presence of profound alterations of the motor convolutions, granular bodies being found in the white substance, and the large pyramidal cells had disappeared. The granular bodies could be followed

into the direct and crossed pyramidal fascia of the cord, into the protuberance and peduncles, and into the internal capsule to the point indicated by Flechsig as giving passage to the fibres of the pyramidal fascia; and the fibres of the same fascia were found altered in the white substance of the frontal and ascending parietal convolutions.

These facts establish anatomically the continuity of the fibres of the pyramidal fascia from the cortex to the lateral regions of the cord, and support Charcot's views of the systemic nature of the disease.—*Gaz. Hebdomadaire*, January 4, 1884.

DYSPHAGIA FROM PARALYSIS OF THE LEFT RECURRENT LARYNGEAL.—K. DÉHIO reports the case of a woman, aged fifty-four years, who had had a hard chill two weeks before her admission into the hospital. At the time of her admission, she was somewhat feverish, respiration accelerated, and the end of the nose and the lips were cyanosed; the cough was paroxysmal, but did not commence by closure of the glottis; it was very harsh, and the voice was a monotone. On laryngoscopic examination, the glottis was seen to be drawn to the right, raised, and almost immovable, the right side only being slightly drawn down during the efforts at phonation and deglutition. The left ary-epiglottic ligament showed the characteristic signs of paralysis of the left recurrent laryngeal.

The clinical interest of the case, which was ameliorated by faradization and injections of strychnia, consisted in the association of paralysis of the recurrent with concomitant trouble of the act of deglutition. The cases reported by Gerhardt, Türck, and Von Ziemssen, caused by diphtheria, bulbar paralysis, and other affections of the cerebral centres, all point to local muscular paralysis, or to a simultaneous affection of the superior laryngeal, and in these cases the troubles of deglutition are explained by paralysis of the ary-epiglottic muscles. In the present case, to explain this trouble, the author admits that the left recurrent innervates the ary-epiglottic muscle of the opposite side.—*Revue Mens. de Laryngol. d'Otol.*, etc., January, 1884.

TUBERCULOUS NODULES IN LUPUS.—M. MALHERBE has recently made a histological examination of a tumor, diagnosticated as lupus, removed from the preauricular region of a woman æt. 34. Tuberculous nodules were found in it, furnishing a rare confirmation of the opinions of those who class lupus among the local tuberculoses.—*Gaz. Méd. de Nantes*, December 9, 1883.

SUDDEN DEATH IN DIABETES.—Of four hundred cases of diabetes observed by FRERICHS, a certain number died suddenly. The common termination was by coma, though its evolution varied in many cases. The coma generally came on after some prolonged effort, great feebleness, coma, and death rapidly resulting. In other cases the course was less rapid; after some premonitory symptoms, cephalalgia, delirium, pains, attacks of mania, and dyspnœa, with or without cyanosis, come on: the breath has a sweetish odor which resembles that of acetone or chloroform; recovery is rare. This form lasts from three to five days. In a third series of cases pain and dyspnœa are absent, coma gradually comes on, the odor of the breath becomes more pronounced, and the urine gives a reddish-purple reaction with perchloride of iron. Coma is more frequent than is generally supposed, and, with phthisis, constitutes the great danger for diabetics.

Frerichs thinks that in the first group the cause of death is cardiac paralysis, due to degeneration of the cardiac muscle. In the last two groups we can simply ascribe it to "diabetic intoxication" without being able to say what the poison is.—*Gaz. Hebdom.*, January 4, 1884.

PORRO OPERATION.—DR. VIOLANI performed this operation on December 18th. The patient died in a few days of septic peritonitis.—*Gaz. Med. di Torino.*

EXTRACT OF PHYSOSTIGMA IN DIARRHŒA.—MASCHKA has several times used the extract of the Calabar bean in diarrhœa, and with a good deal of success, finding it superior to opium. It is very efficacious in the treatment of nervous or emotional diarrhœa, and the diarrhœa caused by acute intestinal catarrh. There is but little danger in its administration; less than in the usual opiates, especially in children, and considerably less than with the extract of nux vomica, which has analogous properties.—*Revue Scientifique*, January 5, 1884.

CYSTOTOMY FOR STRUMOUS CYSTITIS.—At the meeting of the Liverpool Medical Institution on December 20, 1883, DR. RAWDON brought forward the case of a boy, aged seven, who had severe cystitis. He was a weakly boy; micturition was very frequent and painful, and the urine contained pus and blood. Notwithstanding general treatment, he was rapidly getting worse, when cystotomy was decided upon. Under chloroform, the usual lithotomy wound was made upon a staff; the bladder was explored without detecting anything, and a lithotomy tube introduced. Immediate relief was experienced. Appetite and sleep returned, and the boy was, after a time, allowed to go home with the wound partially closed. For two or three months he was able to run about, when the tubercular mischief in the kidney set up a lumbar abscess, which soon terminated fatally. The urinary organs affected with tuberculosis were shown.

MR. REGINALD HARRISON strongly recommended cystotomy, not only for cases of chronic cystitis from other causes, which might be cured by it, but for the relief it afforded to the distressing symptoms which accompanied cases like the present. He had now performed the operation a great many times, and was much impressed with the good results it yielded.—*Lancet*, January 5, 1884.

LIGATION OF THE COMMON CAROTID IN A CHILD.—M. BERTIN, of Cray, reports the case of a child, one year of age, in which the common carotid was successfully ligated for angioma of the parotid region of the jaw.—*Revue de Thérap.*, January 15, 1884.

FLOATING KIDNEY.—M. BERTIN, of Cray, describes a case of floating kidney which came into contact with the uterus. It could be felt by vaginal examination, and was easily displaced by movements and changes of position.—*Revue de Thérap.*, January 15, 1884.

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GOUTY NEPHRITIS.

IN a very interesting paper upon this subject, read before the Berlin Medical Society, which appears in the *Berliner klinische Wochenschrift* for January 7th, VIRCHOW first calls attention to the fact that the association of gout with uric acid-gravel and stone, is, in his experience, a very much rarer event than is commonly supposed; that the number of cases of uric acid-stone or gravel of similar composition in the urinary passages, attributable to gout, is very few; while, on the other hand, gouty subjects are in small danger from such concretions. He calls attention, too, to the number of instances in which the morbid anatomy of gout is discoverable, consisting in the presence of numerous tophi of urate of sodium, often of considerable size, in the ears, on the hands and feet, and even in the foot and leg, without the paroxysms of pain which are considered almost essential to the diagnosis of this affection. These Virchow considers positive symptoms of gout, while the nodes and exostoses—true bony structures—which make up the morbid anatomy of *arthritis deformans*, and which have been more or less associated in the minds of physicians and others with gout, are no part of this affection, unless it happens, as once only occurred to him, that they are associated with the tophous deposits. He declares also that the theory which makes gout the result of the free consumption of albuminous food, is erroneous, because he has met it so frequently in the poorest classes, who are strangers to such a diet. He has, however, no hypotheses of his own to offer, but admits that the disposition is an hereditary one.

But, while gravel and larger concretions in the calyces are not a part of the pathology of gout, the presence of crystalline masses in the uriniferous tubules—not in the interstitial tissue, as Ebstein has announced—is a constant condition, and along with this, chronic interstitial nephritis. Usually, the precipitates are found in the middle section of the medullary cones, more seldom at the apex of the papillæ, and most rarely at their circumference. In these situations they are visible to the naked eye. Microscopically, the concretions are made up of rhombic columns perfectly colorless.

The interstitial nephritis, which is also a part of this condition, and which illustrates the typical chronic form, or contracted kidney, involves, not the medulla, but the cortex. And here the tubules are free from concretions. What, then, can be the cause of the inflammation? In this respect, the inflamed kidney is comparable to the inflamed joint, in which, too, the tophous deposit is not at the seat of inflammation, the synovial membrane, but in the cartilages and ligaments. It must, then, be the fluids charged with sodic urates—the urine in the one instance and the synovial fluid in the other—which are the irritant.

This being the case, can we not have a gouty nephritis which is not associated with urate deposits? This question Virchow answers by a very interesting account of his own case. He had never in his life had an attack of gout. He had occasionally had trifling swellings about his finger-joints, which were red and painful, but without other symptoms. In the previous year, however, his bladder became irritable. There was frequent desire to pass water, and a burning sensation in the urethra, especially at the external orifice. This was intermittent, and he gave it little attention. But the disappearance of a decided feverish state in November of that year was followed by a decided irritation of the urinary organs, with passage by the urethra of almost pure pus, oftentimes but a few drops at a time. Surgical examination failed to discover the seat of its origin. Albumen and casts were also present. He then set himself to determine the source of this pus. He reasoned, if it is a product of mucous membrane, then must it be mixed with an appreciable amount of mucus, which is not the case if it be pus from an abscess or ulcer. To determine this, he added strong acetic acid to the slide, and was astonished at the sudden appearance of a large number of crystals of uric acid, obscuring for the time all other objects. Reasoning from this fact, he concluded that a decided alkaline treatment should help him. He immediately took a large dose of borate of soda, followed by Karlsbad water in the morning, with immediate relief. He continued this treatment,

and in three months there was neither pus, albumen, nor casts, and his urine, in his own words, "ist so klar wie der einer Jungfrau."

That the irritation and inflammation here referred to were the result of the action of urine highly charged with acid urates there can be no doubt, but whether our English confréres, to whom we owe most of our knowledge of gout, will admit this to be a case of that disease we are not so sure. If, however, the pathology of gout consists in a surcharging of the blood and all the fluids of the body with uric acid compounds, we do not see any reason why it should not be so included; and Virchow's experience suggests a mode of examination which we are confident has been rarely applied, and which, if followed, may often lead to similar practical results.

THE RADICAL CURE OF ARTIFICIAL ANUS.

SEVERAL papers have appeared during the past year, which throw some light upon the comparative value and safety of Dupuytren's operation and the more recent procedure of resecting a portion of the bowel and uniting the divided ends with sutures, for the relief of artificial anus. In the operation of the French surgeon, it will be remembered, the object is to destroy the éperon or spur-like process with the enterotome, so as to reëstablish the natural route of the feces, and leave the closure of the abnormal opening to the efforts of nature, or promote its cicatrization by the hot iron or other measures, or, finally, fill the defect by a plastic operation.

Of 83 cases of this operation, collected by HEIMANN, in the *Deutsche medicinische Wochenschrift*, No. 7, 1883, 7, or 8.5 per cent., died, 50, or 60.2 per cent., were complete cures, and 26, or 31.3 per cent., were partially successful, that is to say, the subjects recovered with a small fistule, compelling them to wear a compress and a bandage to prevent the escape of the intestinal contents. The time required for the cure varied from two to six months. At least three of the deaths were due to causes unconnected with the procedure, so that it may be said to be comparatively free from danger.

In view of the uncertainty and tediousness of Dupuytren's operation, the elder Gross, thirty-seven years ago, suggested to a patient excision of a portion of the bowel with suturing of the cut ends, but the proposal was declined. Hence it remained for Dr. Kinloch, of Charleston, S. C., in 1863, to carry the suggestion into effect, the report of the case having been published in THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, vol. liv., 1867. Although the operation failed, to Dr. Kinloch belongs the credit of having been the first to practise enterectomy and enterorrhaphy for the lesion under consideration.

Up to the present date abdominal incision, with intestinal resection and suturing, has been practised in at least 37 instances, of which 29 have been analyzed in a valuable paper contributed to the *Révue de Chirurgie*, No. 7, 1883, by MM. BOUILLY and ASSAKY. The operators were Billroth in 7 cases, Schede in 3 cases, Julliard, Meusel, Rydygier, Schinzinger, and Wienlechner, each in 2 cases, and Albert, Bardenheuer, Baum, Bouilly, Dumreicher, Dittel, Esmarch, Gussenbauer, Hofmokl, Hueter, Kinloch, Madelung, Novaro, Schonborn, Tauber, Thiersch, and Weiss, respectively, in 1 case. Of the 37, 11, or 30 per cent., died, and 26, or 70 per cent., recovered.

The cause of death was peritonitis in 7, embolism of the pulmonary artery in 1, collapse in 1, pneumonia in 1, and ileus in 1. Of the recoveries 25 were complete cures, and 1 failed. All of the operations, with the exception of that of Kinloch, which recovered, were done under antiseptic precautions.

It will thus be seen that, when compared with the more simple operation, enterectomy is a serious procedure. Even if we deduct five deaths from peritonitis due to the escape of the contents of the intestine into the peritoneal cavity from the faulty application of the sutures, which were, as a rule, composed of catgut, perfect operations afford a mortality of 19.35 per cent., as against 5 per cent. for Dupuytren's method. Hence, we think that the procedure should be reserved, first, for the more simple cases in which compression, cauterization, the enterotome, and autoplasty have failed; secondly, for cases of great destruction of the intestinal wall, with extensive prolapse of the mucous membrane, and with or without invagination of the upper portion of the gut; and, thirdly, for the cases in which the ends of the intestine are so disposed that, even after the destruction of the éperon, there could be no reëstablishment of the natural course of the feces, as would happen if the lower end of the gut were placed above the upper end, if the two segments crossed each other at a right angle, or if there were a notable difference in the calibre of the two ends of the intestine.

THE HOT WATER MANIA.

THE hot water drinking mania, is one of those periodical sanitary epidemics, which, like certain moral epidemics, now and then rage through this country. The secular newspapers have taken it up, and elaborate editorials indicate the interest which the general public has manifested in this supposed new remedy. The persistence of the mania is a proof of the vitality of the system. The epidemic had long since spent its force, if its energy had not been recruited from the aggressive enthusiasm of new converts and disciples.

At the risk of chilling the spirits of hot water disciples and advocates, we are compelled to maintain that the method is not new. It is always an ungracious task to temper enthusiasm and to substitute a sober realism for the free flights of the ardent imagination, but we are restrained by our duty as medical journalists, to the domain of scientific verity. The use of hot water as a beverage, had its real origin in the method of stomach irrigation inaugurated several years ago by our German colleagues, as a remedy for chronic gastric catarrh. An ingenious and pseudo-scientific New York empiric, bethought himself of hot water drinking as a substitute for hot water irrigation. But Dr. Sangrado had preceded the modern empiric in the hot water practice. In the claim for priority of discovery, we hold that the patron of *Gil Blas*, is entitled to the honors, for did not the system of Sangrado consist in bleeding *ad deliquum animi*, and copious libations of warm water? This interesting historical question settled, we can now proceed to determine the real value of the practice.

> ——"All the water in the ocean
> Can never turn a swan's black legs to white,"

is a saying of Shakespeare; so no amount of mere assertion can prove the value of hot water as a remedy. Sangrado was besought by his pupil Gil Blas to give up a practice which had proved so deadly, but this great medical philosopher, like so many of his ilk in our day retorted "have I not written a book?" which, as it was devoted to proving the value of the system, must not be disgraced by a change of opinion on the part of its author. Surely it is "the irony of fate," to have hot water revived as a remedy, by modern science.

Hot water serves several purposes: it is a means of applying heat to the interior of the body, for a well-instructed patient may drink water at 120° F. The effect of the heat is to dilate the stomach vessels, and thus increase the blood-supply to the gastric glands. An increase of functional activity is thereby induced. The reflex effect of the increased heat is manifest in a considerable stimulation of the solar plexus, the organs of vegetative life, and the circulatory system. The result of such stimulation must necessarily be a widespread increase of functional activity.

Large draughts of hot water act mechanically by dislodging the mucus adherent to the mucous membrane, by dissolving the alimentary refuse, and by washing into the circulation soluble constituents not disposed of in the ordinary process of digestion. The result of this is to increase the primary assimilation in an effective way. To a less extent, draughts of hot water, therefore, wash out the stomach, and prepare the organ for better work, as irrigation does.

The picture has its sombre side. Water drinking, though the water be hot, is not without its drawbacks. There are those who believe that too much water is an impossibility. The late Dr. John F. Meigs was one of those—an apostle of water-drinking—and he has had many followers. Even so good a thing as water may be abused. Too much water taken during the progress of digestion, may so far dilute the gastric juice as to render it unequal to its proper work. The digestive process being thus weakened, a condition of anæmia results. For the purposes indicated above, hot water should be taken either before digestion has begun, or after it is completed. In the use of this agent, as of all other therapeutical remedies, the true principle is to adapt the remedy to the conditions present. Hence, it follows that each case must be studied by and of itself, and hot water given or withheld, according to the state of the stomach, or of the general system.

HOSPITAL TRAINED NURSES.

From all sides comes testimony in favor of this comparatively recent system of training nurses. Few physicians in active practice have failed to share its advantages. In place of the ignorant, garrulous, obtrusive, yet inefficient, and often filthy crone of fifteen years ago, we meet in the sick-room the quiet, intelligent, refined, and helpful woman, whose presence is a pleasure and comfort to the physician as well as to his patient.

It is evident, too, that this new field of operation for women has increased the opportunities of the better class for earning a living under circumstances which are not lowering to self-respect or dignity, or inconsistent with that refinement and intelligence which are woman's most effective adornments. The companion of ladies, it is necessary that she herself should have ladylike attributes, and the feeling that the possession of these, and the qualifications that make her an efficient nurse, are necessary to success, tend to increase both. At the same time training does not exclude from the ranks girls of humbler origin and more limited advantages, who are nevertheless teachable and susceptible of refinement.

Another advantage of the system of training schools for nurses accrues to the patients in the hospitals, in connection with which the schools are established. To these the training school is a great boon. The old-time hospital nurse was worse than the private nurse of the same period; for the patient of the latter was, as a rule, at least protected from

cruelty and generally from positive neglect. A catalogue of the discomforts, and even injuries sustained by hospital patients, due to the neglect and cruelty of their attendants would be heartrending. Especially is this the case where pauper or convict help is employed for this purpose. We are quite sure that the supply would not exceed the demand if every general hospital of any size had connected with it a training school whose pupils should take the place of the illy, but still sufficiently, paid—when their qualifications are considered—nurses of to-day.

It has been suggested that similar schools should be established for males. But we doubt whether they would be successful. Woman possesses naturally many of the qualifications for nursing, and the teaching and example of years cannot give them to men. On the other hand, men of the required intelligence are not likely to be found ready to submit to the regulations and to take the time necessary to secure the proper training.

In this connection, we may be permitted to say a word in relation to nurse directories, of which the two most notable examples exist in Boston and Philadelphia. The advantages of these can only be appreciated by those who have gone through the experience of getting a nurse under the old and new systems, an hour or two sufficing to obtain a competent nurse by the latter, when by the former a laborious search, extending through an entire day, often resulted in securing an unsatisfactory substitute.

The Boston Directory is an admirable success, resulting last year, we are informed, in a profit of $1200, which was turned over to the Boston Medical Library Association. But from what we can learn, while the Philadelphia Directory is a success in most respects, the financial exhibit is not so satisfactory. We fear this is largely due to the fact that some of the most prominent physicians in Philadelphia are in the habit of sending their patients, to whom the trifling expense would be no consideration, not to the Directory, but to the house where the nurse they desire to employ happens then to be engaged. The nurse directory in every city is so great a convenience to physicians, patients, and nurses that it should have the benefit of their entire and unconditional support.

GOVERNMENT PATRONAGE OF MEDICAL INSTITUTIONS.

THOSE restless utilitarians who seek in State supervision of medical affairs the ultimate good, will be enlightened as to the tendency of such interference by watching some proposed legislation in the present Congress. One scheme is to establish a great medical university to teach all the methods of the so-called "schools." The most recent proposition is to compel the Army Medical Examining Board to accept the creeds of all comers, and to make no distinction between physicians and charlatans. The next step will be to constitute a board of Homœopathic examining surgeons to do justice to their system, for, with what grace can the present boards, composed of "old-school" surgeons, decide on the merits of "new-school" candidates? The innovation at the University of Michigan, which gave a department to homœopathic practice, does not satisfy the Eclectics, and they demand, and doubtless will soon receive, some kind of recognition of their "claims."

Those gentlemen of the profession who wish a State Board of Examiners, who alone shall have power to grant licenses, like the *Staats-Examen* of Germany, should make up their minds to a mixed commission of a political complexion, varying with the changing fortunes of political parties. It will be a sad day for our medical institutions when places in them shall be the prey of political rivalry. It is wiser to reform ourselves—to improve our methods by our own machinery, and to increase our attainments by the natural evolution of our own powers.

OUR attention has recently been called to a form of medical advertising, which has grown out of the introduction of the telephone into general use. The telephone exchanges supply their patrons with printed lists of their subscribers, and some of the more enterprising of them have their lists arranged according to trades, as well as alphabetically, and then, with a view of bringing more grist to their mill, they have added an advertising sheet for those of their patrons who desire, for a consideration, to bring their wares more prominently to the attention of the public.

We have recently seen the pamphlet list of a Western exchange, the last page of the cover of which is entirely devoted to the cards of a few of the more "enterprising" doctors of the town, who thus conspicuously advertise their address and telephone number. An examination of this list shows it to be made up of a motley crew. We find the names of 2 magnetics, 1 eclectic, 17 regulars, 5 homœopaths, and 1 botanic, intermingled, and without any mark by which the public can distinguish the peculiar methods of practice of each.

This is a new outcropping of the trade spirit, and we are glad to learn that the Polk County (Iowa) Medical Society has formally resolved that this method of advertising "is not conducive to the best interests of the profession"—indeed they might have said it is injurious to the profession's best interests. It is contrary to the spirit of the Code of

Ethics, and directly lowers the profession to a trade level.

We trust that wherever this new form of advertising has grown up, the profession will promptly condemn it in unmistakable language.

REVIEWS.

The Diagnosis and Treatment of the Diseases of the Ear. By Oren D. Pomeroy, M.D., Surgeon to the Manhattan Eye and Ear Hospital, etc. 8vo. pp. 392. New York: Bermingham & Co., 1883.

This book belongs to that class of works on ear disease which appears to be growing fashionable, viz., one in which the authors, for there are already several in the field, seem to think that anatomy and physiology can be dispensed with. This is all the more surprising and deplorable because the books are addressed not to specialists, who may fairly be presumed to know the minute anatomy and physiology of the ear, but to the general practitioner and the student, who presumably are not very familiar with this abstruse subject. Hence these books, at best, constitute what may be termed second volumes of a work in which the first volumes, which should be on anatomy and physiology, are wanting.

They are too anticipatory in arrangement, and partake of the unfortunate nature of the method of medical instruction which hurries the medical student from his anatomy and elementary branches to the clinic-room and the hospital, to learn to treat pneumonia and hip-joint disease, before he knows the structure of the lung or the anatomy of the acetabulum.

This book contains many pleasant allusions to the work of the author's colleagues in this specialty, and ample justice having been done in this respect, the author has brought his book "down to date" in its encyclopædic information upon treatment. Many valuable and important facts have been brought out, as a reference to Holt's method of inflation of the tympana, by puffing out the cheeks instead of swallowing water at the moment of inflation; it seems superior to Politzer's method in our hands. It is with pleasure we note also that the connection, at least clinically, between progressive locomotor ataxia and deafness has been laid before the reader. It is to be regretted that there has been some very careless proof-reading, but it is to be hoped that the errors will soon be corrigible in a new edition of the work. We refer to such mistakes in spelling as "Brunston" for Brunton, "Bertholet" for Bertolet, "Séiglè" for Siegle, "Botticher" for Boetcher, "Lascource" for Lasource, "Greene" for Green, "Rholand" for Roland, "Wein" for Wien, among proper names, while among ordinary words, "acousticus" often appears for acusticus, even in the table of contents, and douche appears as "douché." On pp. 39 and 40 there occurs the following quotation from Politzer's *Lehrbuch:* "The inclination of the drum-membrane in children has hitherto been described as nearly horizontal. By means of numerous measurements Dr. J. Pollak has shown this view to be erroneous, there being no perceptible difference in the inclination of this membrane in infancy and adult life." To this statement exception must be taken. If anyone will examine a preparation of the skull of an infant in which the membrana tympani is retained *in situ*, he will observe that the membrane conforms to the curve of the base of the skull, and is more nearly horizontal than otherwise, and much more so than in the adult or large child's skull. This fact has so much clinical importance, both in examinations and in operations on the membrane, in aiding us to decide the extent or absence of abnormal retraction, and the point in the membrane at which to make a proper incision, that it is necessary to question the accuracy of Pollak's observation.

We regret to find that many of the figures in the book, intended to represent normal and pathological conditions of the membrana tympani, as Figs. 17, 46, 68, 69, and 70, are extremely bad, but it is with pleasure we note the goodness of such figures as Nos. 20, 21, and 22, illustrative of perichondritis auriculæ.

The binding and the paper of the book are handsome, but the print is a little too fine and too close to be easy for reading, though, of course, it makes the book compact, and aids the author to make the information contained in its numerous pages, very copious. The work, as a whole, is certainly a valuable addition to the literature pertaining to the diagnosis and treatment of diseases of the ear.

Transactions of the Pathological Society of Philadelphia. Volume Tenth. 8vo. pp. xxii. 307. Philadelphia: 1882.

The tenth volume of the *Transactions of the Pathological Society of Philadelphia* contains, like most other volumes of the same character, a great deal that is interesting intermingled with much that is merely sketchy, or without interest apart from the specimens described. The arrangement of the matter in the volume before us is admirable, the specimens and their descriptions, or the papers accompanying their presentation being carefully classified according to location. In this respect the *Transactions* would serve as an admirable catalogue of the specimens in the museum of the Society.

Volumes I. to IX. of this series, we are informed, can be purchased for fifty cents a volume, upon application to the Treasurer, No. 1423 Walnut Street, Philadelphia.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 8, 1884.

The President, Robert F. Weir, M.D., in the Chair.

MULTIPLE INCISIONS FOR CICATRICIAL CONTRACTION.

Dr. A. C. Post presented a boy who had received an injury of the palmar surface of the ring finger of the left hand, and as a result the finger was bent at an angle of about seventy or eighty degrees. He operated for the deformity by making a series of transverse incisions, probably ten or twelve in number, and subsequently dressing the wounds with subnitrate of bismuth, and applying a metallic splint. The case illustrated the benefit of multiple instead of single incisions.

COMPOUND FRACTURE OF THE HUMERUS, INVOLVING THE SHOULDER-JOINT.

DR. L. A. STIMSON presented a patient, a man thirty-five years of age, who fell two stories, striking his arm while on the way down upon a railing, and producing a compound fracture of the upper end of the humerus, communicating largely with the shoulder-joint, the wound extending from the coracoid process across the upper part of the arm. The wound was washed with a bichloride solution, one to two thousand, partly closed by sutures, two drainage-tubes were inserted, and antiseptic gauze applied. The interest in the case was confined to the plaster dressing which was used. It was a combination of plaster dressing upon the arm and a plaster jacket upon the body, united by three iron cross-pieces, which held them so firmly that the patient could be moved or turned in any direction without producing pain. Rapid recovery took place with a movable joint.

SPONTANEOUS DISLOCATION OF THE HIP-JOINT, OCCURRING IN THE COURSE OF ACUTE ARTICULAR RHEUMATISM.

DR. STIMSON also presented a patient, a woman thirty-seven years of age, who had an attack of rheumatism in December, 1882. The history of the attack was obscure, but the patient said that many joints were involved, that she remained ill for a long time, and that the deformity occurred as early, at least, as the following April. She finally came to Bellevue Hospital last summer, where Dr. Stimson saw her first in the month of September, and recognized a dislocation of the right hip-joint, backwards, upon the ilium. The interest of the case was partly in the rarity of the occurrence, and also the facility with which the lesion may be overlooked. The subject has been recently written upon by French surgeons, and he had nothing to add except to say that the symptom of sudden cessation of pain sometimes noted at the moment the dislocation occurs, does not appear to have been present in this case.

EXSECTION OF THE WRIST-JOINT.

DR. A. G. GERSTER presented a patient upon whom he performed exsection of the wrist-joint November 5, 1883. The patient, a woman thirty years old, had had a severe attack of acute articular rheumatism, which involved nearly every joint of the body, all of which regained their functional ability except the wrist-joint, which remained swollen, hot, and stiff. The patient was treated in the medical wards by the use of internal remedies, counter-irritation and local applications, but without much improvement, and finally she was transferred to the surgical side, where Dr. Gerster found very extensive agglutination of the flexor and extensor tendons in their sheaths, and the hand resembled more a flipper than a hand. With reference to the joint proper, he found evidence of disease of the radio-carpal articulation. The condition of the carpus proper, however, made him anticipate that the carpal joint proper was not involved. On the inner side, moreover, at a point corresponding to the radial artery, a reddened spot appeared on the skin, showing that perforation was imminent. He proposed to the patient to have the joint examined, but if the condition were such as demanded it, finally to perform exsection. She consented to the operation, and Dr. Gerster made a lateral incision upon the ulnar side, wishing first to remove the ulna and thereby increase the facility with which the radius could be removed. In other words, he performed Lister's operation. Having exsected the carpal ends of the radius and ulna, the wound was closed and capillary drainage established by the introduction of a few strands of catgut. A bichloride solution was applied, and sufficient support was given by antiseptic dressings to obviate the necessity of using a splint. No fever whatever followed the operation, and on the tenth day, when the dressing was changed, it was found that primary union of the wound had taken place. The small strips of iodoform gauze placed immediately over the wound were simply colored with blood, but the remainder of the dressing was perfectly clean. Active and passive motion was begun on the second day after removal of the dressings, and had been continued. The flail-like mobility was considerable after the operation, but this has been improved, and the patient is now able to extend and flex the hand without support, and the mobility of the fingers has also improved very much in consequence of careful orthopædic treatment.

Dr. Gerster expected that she would have a tolerably useful hand. The carpal ends of the radius and ulna to a distance of two inches were removed, and the rest of the carpus was allowed to remain. The ends of the radius and ulna which were removed were devoid of cartilage, and the joint contained a small quantity of sero-cheesy pus. The capsule of the joint was infiltrated and thickened, the inner aspect of it was red, giving the peculiar velvety appearance seen in joint disease, and the perforation mentioned as being imminent on the volar side of the joint was found to be due to the burrowing of pus. No examination was made for the tubercle bacillus.

DR. POST thought it a very unusual occurrence for such extensive disease of the joint to occur without involving the carpus.

REMOVAL OF THE SUPERIOR MAXILLARY DIVISION OF THE FIFTH NERVE AND MECKEL'S GANGLION BY CARNOCHAN'S OPERATION.

DR. J. W. HOWE presented a patient with the following history: The patient's name is Freidman, æt. 45, and a native of Hungary. Twelve years ago, without any appreciable cause, she felt a pain in the region of the lower bicuspid tooth on the right side. The pain gradually increased in frequency and in intensity. It was usually aggravated by exposure to cold and heat. The paroxysms continued up to within three years of her admission to the hospital, varying little in severity. The inferior maxillary was first involved. Three years ago pain appeared in the upper division of the fifth. It started on the slightest provocation. Mastication became so painful that nothing but liquid food could be taken. Laughing, sneezing, swallowing, crying, all occasioned exquisite pain. For a year previous to the operation the pain was almost continuous, and there were occasional exacerbations of such severity as to produce delirium. Nourishment could only be taken in small quantities, and as a consequence she became emaciated and weak. Dr. Henry Schweig, under whose care she is at this time, informs me that he administered morphine hypodermically, and endermically, by the mouth, with and without atropia, without any alleviation

of the pain. He could not administer more than fifteen minims without aggravating the mental trouble, so that it was impossible to give heroic doses of the drug. He also tried aconitia, without any effect. At my request he also tried hypodermics of strychnia and hypodermics of atropine, without avail. The galvanic current was also tried for four weeks, with no effect. The only drug from which an appreciable effect could be obtained was nitroglycerine. This medicine relieved the pain for two or three weeks and then failed like the other remedies. The Doctor then brought her to St. Francis Hospital, and I performed Carnochan's operation on May 29, 1883, removing the superior maxillary division of the fifth and Meckel's ganglion. For three days after the operation the patient slept well, and there was little or no pain excepting that which naturally results from the operation. At the end of that time she had severe pain in the region of the inferior dental, and a spasm of the muscles of the affected side. This disappeared and was replaced by a dull pain in the wound and in the ear. A drainage-tube was inserted, and through this a solution of chloral, ten grains to the ounce, was injected twice each day. This relieved the pain. She left the hospital on June 11th, almost entirely free from pain, and able to eat and sleep and live comfortably. It is now seven months since the operation, she has gained in weight and strength, and is free from pain unless exposed to very sudden changes of temperature. She eats and drinks with comfort, and considers herself greatly improved by the operation. Notwithstanding the good result, I am not in favor of the operation, as I think further experiments with medicine could gain the same result that I attained; more especially by resorting to the hypodermic injection of strychnia.

DOUBLE GENU-VALGUM OSTEOTOMY BY MCEWEN'S METHOD.

DR. W. T. BULL presented a patient with the following history:

J. H. H., æt. 16, errand boy; admitted August 15, 1883. For the past two years, patient states, both of his knees have been growing weaker; knocking against each other while he was walking or standing. This condition has grown much worse during the past four months. Family history good. General health always good.

When patient stands with his knees in apposition, and with his feet as closely approximated as possible, the distance between the internal malleoli equals eight and a quarter inches. When patient lies on his back, this distance equals nine and a quarter inches. Knee-joints are perfectly normal; internal condyle elongated.

Aug. 24.—At 2.30 P.M. patient etherized, Drs. Bull and Little operating. Incision was made on inner side of the right thigh, through the skin and underlying tissues down to the bone, according to McEwen's method. Bone was then partly divided by chiselling, the remainder of the bone being fractured by manual force. The small hemorrhage was controlled by pressure. The limb being forcibly straightened, the following dressing was applied: Small peat-bag was placed over wound, and a full Lister dressing applied from the ankle to the gluteal fold; over this was placed a loose plaster-of-Paris splint.

During operation, a stream of a solution of salicylic acid was constantly projected over wound. Before applying the dressing, wound was cleansed with a solution of hydrargyri bichloridum (one to one thousand). Same operation was then performed on the left leg, and a similar dressing applied.

7 P.M.—Patient made good recovery from ether; complains of considerable pain in left foot. Pain increased, and became so severe by 12 M. that splint was cut open and limb held in position by properly adjusted sand-bags.

℞.—Magendie, ♏v. By hypodermic.

Aug. 25.—Pain continues. In both feet there is a sensation of numbness, and well-marked signs of retarded circulation. Morning, temperature 99.2°, pulse 96. At 12 M. both dressings were removed, and fresh Lister dressings were immediately applied. Long side-splints, reaching from axilla to the ankle were applied. Circulation began to improve, and in a few hours was apparently normal. Temperature 100.8°, pulse 105. General condition of patient very good.

26th.—During the following seven days patient had a slight recurring rise of temperature, with a pulse varying from 90 to 104. Temperature normal on ninth day, and continued so during the remainder of the treatment.

On Sept. 11 dressings removed. Wounds of original incisions nearly healed. Simple dressing was applied, with long side splints.

14th.—Plaster-of-Paris splint applied from toes to the groin of each leg.

On October 23d splints were removed. Right leg was found to be in excellent position; there was some slight tendency to a bending inwards of the left knee. Rubber bandages were then placed around each knee-joint, and patient allowed to walk about.

Dec. 15.—The bowing inwards of the left knee is almost entirely rectified by a brace, which extends from the sole of the foot to the upper portion of thigh, with a hinge-joint at the knee.

SUB-TROCHANTERIC OSTEOTOMY OF THE NECK OF THE FEMUR FOR CONTRACTURE AND ANCHYLOSIS OF THE HIP.

DR. W. T. BULL presented a patient showing the result of the above operation. Mary C., ten years of age, born in the United States, was admitted to St. Luke's Hospital, September 14, 1883. She was healthy until three and a half years old; then without any injury she commenced to develop hip-joint disease of left limb. Treated for five years at Hospital for Ruptured and Crippled. Patient left that hospital when eight and a half years old, with limb in good position. Very soon afterwards contracture of hip-joint set in, and increased rapidly during the past six months. On admission, left thigh is flexed and adducted, so that patella is situated two and a quarter inches above opposite patella and outside the median line of right thigh. When patient lies with back on a table, thigh is ankylosed, so as to form nearly a right angle with longitudinal axis of body. Except for a very slight flexion of femur, movements at hip are wanting without ether. Under ether small amount of motion is possible when standing erect, toes of left foot are about five inches from ground, and heel fully a foot In walking patient places the toes of left limb only to the

floor, and locomotion is performed in a hopping style. Pelvis is very markedly tilted downwards on left side, and the lateral curvature of the spine is extreme. Motion in knee-joint is perfectly normal.

Head of trochanter on left side is one and a half inches above Nélaton's line. Muscular atrophy of left thigh shows a dimunition in size of two inches.

October 4.—Tenotomy performed on gracilis and adductor tendons. Open division of fascia and tendons below sup. spinous process of ilium; femur divided just below trochanter margin and wedge removed, the base of wedge measuring a half inch. Lister dressing with long side-splint applied. Extension applied.

October 26.—Wound of femur entirely healed. Other wounds nearly closed.

November 9.—Union of femur solid. Left leg shortened two and a quarter inches.

TRAUMATIC ANEURISM OF THE VERTEBRAL ARTERY.

THE PRESIDENT presented a patient who had had the above affection, and remarked that there were only ten cases upon record. Of thirty-two cases of wound of the artery collected by Fischer, nine eventuated in aneurism. For the injuries to this vessel, the carotid was tied twelve times, with an unfavorable result. In the aneurismal cases, the carotid artery was tied five times, the patients all dying. Once it was exposed, but not tied, and that patient recovered; but why is not clearly seen. In two cases the aneurism was cured by cutting down, opening the sac, and plugging the opening in the artery. In the patient presented this evening, the aneurism was cured by digital compression. The man was twenty-eight years of age, and on the eighth of December was struck with a knife, half an inch below the lobe of the right ear, just behind the jaw, his opponent standing in front of him and holding the weapon in his left hand. Considerable hemorrhage took place, though when the man entered the hospital he was not very much exsanguinated; and the bleeding having ceased, an iodoform pad was simply placed over the wound, which was not disturbed until the tenth day, when the dressings were removed, and the wound found healed. Forty-eight hours after the receipt of the wound, the patient experienced a peculiar sensation in the head, and sudden paralysis developed, involving the opposite arm, from which he has not yet entirely recovered; although there has, in this respect, recently been marked improvement. After removal of the dressings, a slight swelling at the posterior margin of the sterno-cleido-mastoid muscle, and just below the mastoid process, was observed. This tumor had a feeble pulsation, which gradually increased up to the beginning of last week, when the signs of an aneurism were strongly marked over a space two inches in diameter, and a bruit was heard. The diagnosis was made positive by pressure on the cardiac artery. When this was made upon a level with the thyroid cartilage, pulsations in the swelling were not arrested; but when pressure was made on a level with the tubercle of the sixth cervical vertebra pulsation in the tumor at once ceased; and when the pressure was removed, it immediately returned in full force again. The diagnosis was in this way made clear, and was corroborated by his colleague, Dr. Markoe. The question was, what should be done? The best suggestions which he had seen upon this subject were those by Holmes, in his article on aneurism, written in 1873. Dr. Weir finally determined, before opening the sac and plugging it (which had afforded the best outcome of treatment), first to apply ice, and, if that failed, to resort to digital compression; because he had found that pressure upwards and forwards upon the lower portion of the tumor arrested pulsation. He, therefore, secured a relay of medical students as assistants, and last Thursday—after having used ice for some days without any change in the tumor—he began, at twelve o'clock, the treatment by digital compression. At two o'clock the pulsations were almost arrested, and at three o'clock they had entirely ceased; but the pressure was kept up lightly until seven o'clock. Since that time there had been no trouble in this region, and the tumor has rapidly subsided. No cerebral trouble ensued during the treatment.

DR. L. A. STIMSON said he could add one case to the list of unsuccessful ligatures of the common carotid artery for wounds of the vertebral artery. The patient was in Bellevue Hospital. He had been wounded by a pistol ball, which entered the mouth, passed into the left side of the pharynx, and made its exit at the back of the neck. There had been a profuse hemorrhage, but when he saw the case bleeding had ceased. The hemorrhage recurred the next day, and the common carotid was tied by the house surgeon. The patient died within a few hours afterwards. At the autopsy, it was found that the ball had passed between the atlas and the skull, and had divided the vertebral artery.

DR. W. S. HALSTED referred to a case which he saw at the Chambers Street Hospital. It was one in which the patient had received a stab with a knife between the atlas and the occiput, producing paralysis on the opposite side and of the muscles supplied by the spinal accessory nerve upon the same side, and the vertebral artery was not injured.

REMOVAL OF LARGE URETHRAL CALCULI BY INCISION THROUGH THE PERINEUM; WEIGHT OF CALCULI, FOUR HUNDRED AND FOURTEEN GRAINS.

DR. JOSEPH W. HOWE presented specimens with the following history: An Italian, Stephen Canziani, æt. 31, was admitted to the surgical division of St. Francis Hospital on December 31, 1883, with the following history: At the age of thirteen he was troubled with stone in the bladder, which was removed by an Italian surgeon through an incision in the perineum. The wound in the perineum only partially healed, and a fistula remained, through which the urine escaped for several months. Some time afterwards the patient passed a small calculus through this opening. The exact time of this occurrence the patient does not remember. Shortly after the expulsion of this stone, the opening in the perineum closed, and he had no further trouble up to within five years of the date of entrance to the hospital. He then noticed a hard mass in the perineum, which gave him some pain on pressure, as well as pain on micturition. The mass grew slowly, with an increase in the pain. It was easily moved from side to side. A friend advised him to poultice the swelling in the perineum. After following this advice for a few weeks, the integument ulcerated, and a calculus the size of a pigeon's egg was extruded. The patient likened this mass to a piece

of hard rubber. From the passage of this stone the patient experienced great relief, and he had no special trouble for four years, when he noticed two protuberances in the perineum, which gave him pain on pressure as well as pain on micturition. The pain during the passage of the urine was of a burning character, and lasted some time after the urine was voided. There was also considerable difficulty in emptying the bladder. These prominences continued to increase until the patient's admission to St. Francis Hospital.

On examination I found two prominent enlargements occupying the median line of the perineum. They were both easily moved, or rather the tube in which they were contained readily moved from side to side. The upper tumor was about half an inch from the lower and larger one below. I could, however, draw them together, and by the rough grating make out their character. The upper end of the first calculus was situated about three inches and a half from the meatus, the second and larger one extended down to within half an inch of the anus. The patient did not seem to suffer much pain when they were handled.

On Saturday last, the 5th, the patient was etherized, the meatus, which was very narrow, was incised so as to admit a No. 18 American sound. Its passage down the urethra was unobstructed until the first calculus was reached. A No. 5 was then introduced, but failed to pass the obstruction. An incision was then made in the median line of the perineum, commencing at the middle of the upper calculus, at the upper boundary of the perineum, and extended down to within three-quarters of an inch of the anus. The upper stone was then pushed into the opening and extruded; the lower one was then removed by completing the incision through the perineal tissues. A further examination showed that the urethra was very much dilated from the lower caculus to the bladder.

I first passed one finger in through the neck and discovered another calculus inside the bladder. I introduced a second finger along with the first one, stretching the parts easily. A stone-forceps was then introduced, and the cystic calculus removed. The calculus which occupied the anterior portion of the urethra was found to weigh one hundred and thirty-five grains (Troy). It measured an inch and a half in length and three-quarters of an inch in its broadest diameter. The lower calculus weighs two hundred and seventy-nine grains, and is an inch and three-quarters in length and an inch and a half in its broadest diameter. The calculus taken from the bladder weighs three hundred and ninety-five grains, is two inches in length and an inch and an eighth in its transverse diameter. The patient's temperature last night was 99.5°, and he is so far doing well.

DR. A. C. POST said there was a case on record in which a stone passed spontaneously from the female urethra, and described to be as large as a goose egg. He thought a number of cases of this kind had occurred in both sexes, in which stones of very considerable size had passed through the dilated urethra. He was not able to give the particulars of a number of cases occurring in the practice of his son in Beyrout, but his impression was that in some of them the calculi were larger than that presented by Dr. Howe.

The Society then proceeded to the transaction of miscellaneous business.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, January 8, 1884.

THE PRESIDENT, WILLIAM J. MORTON, M.D., IN THE CHAIR.

DR. RALPH L. PARSONS read a paper on

DETENTION IN ASYLUMS.

He spoke first of the question, whether sane persons were not often improperly or unjustly detained in asylums for the insane; and secondly, whether many uncured and incurable patients who were now methodically detained in asylums might not advantageously be returned to their relatives, or placed in the care of private families under State supervision.

It was assumed, in the first instance, that the detention of patients after recovery had taken place, for a longer time than might be required, was quite possible, and even probable, in some instances. But he claimed that such detentions were not usually of serious import to the patient; that, on the other hand, too early discharge might be more injurious. It was also admitted that maliciously unjustifiable detentions were quite possible, as any other sort of injustice is possible on the part of persons holding positions of power and responsibility. But reasons were urged by Dr. Parsons in support of the belief that such malicious detentions were at least very rare; that sentiments of honor and professional pride were strong deterrents, to say nothing of the great danger of detection in the commission of the wrong, and the ease with which patients who were decidedly insane obtained their enlogement through the intervention of the courts.

Cogent reasons were given why various classes of convalescents ought to remain under asylum care for a period of time after they appeared to be well; as, for instance, when they would be immediately subjected to the exciting cause of their insanity on their return; when the progress toward convalescence had been characterized by relapses, or when dangerous delusions had been entertained and had faded away so gradually that there were difficulties in judging whether they had passed away entirely.

But, on the other hand, the discharge of certain uncured curables before they were well was advised, as when, after making a certain degree of improvement, this improvement stopped, and the patient seemed to retrograde. It might be safe and highly advisable to discharge some of these patients before they were well.

The major part of the paper was devoted, however, to an advocacy of the discharge from the asylum of harmless incurables and their return to the care of their friends, or placing them with ordinary families as boarders and in some sort as members of the families. It was claimed by the reader that, however comfortable and happy such patients may appear to be in large asylums, there are many causes of annoyance and discomfort that would not be experienced in ordinary family life; that notwithstanding the fine buildings they occupy, and their freedom from care, they are still prisoners and exposed to many disagreeable associations and associates.

Quotations were made from Dr. Bucknill and from Dr. Maudsley, strongly supporting these views.

The question was then considered, what classes of incurables might safely and with benefit be released from asylum restraints? since, in the case of a great majority of such patients moderate cost of maintenance would be essential, those only would be adopted who were quiet and orderly and would require no especial attendance or supervision. Habits of industry would be favorable.

Whether such patients would do better with their relatives or with strangers would depend on the circumstances of the family, the state of health, the surroundings, the feelings or notions of the patients, etc. It would be found, however, that many patients who would not do well with their own kindred would be happy, contented, and useful with congenial strangers. It would be impossible for the patient to resume his former position and influence in his own family, and hence he would be subjected to irritating restrictions and annoyances there.

As a preliminary measure, a system of legalized furloughs was advocated, to the end that at first the patient might still be under legal restrictions, and easily returned to the asylum if the trial at large should prove a failure.

Properly constituted authorities should make the selection of patients for the trial, with the assistance and under the advice of the asylum superintendent. The families in which the patients should be placed should be selected with great care. While at first there might be found very few suitable families who would assume the charge, it was thought that, when a beginning had been made, plenty of suitable homes would be offered. Reference was made to the multitude of respectable and responsible families who take summer boarders for a moderate compensation, and the probability that some of these families would prefer one or two permanent patient boarders to a number of sane boarders for a short season during the busiest portion of the year. A suitable system of visitation and of reports was advocated. The paper closed with the following summary of conclusions, to wit:

1. That inasmuch as many recoveries take place in asylums for the insane, it is to be expected that some convalescent patients may at any time be found in the wards.

2. That while, possibly, now and then a convalescent patient may be detained on probation an unnecessary period of time, such cases are not of frequent occurrence, nor important in their consequences when they happen, and that when they do occur the detention is very rarely indeed through criminal intent.

3. That many harmless incurables are unnecessarily detained in asylums for the insane; that these incurables would be happier in the enjoyment of ordinary family life and associations; and that systematic efforts should made to secure their enlogement, and their establishment under family care.

4. That under certain circumstances curable patients should be removed from asylum restraint and associations while yet uncured.

Owing to the lateness of the hour, the discussion upon Dr. Parson's paper was postponed until the next meeting of the Society.

CORRESPONDENCE.

MIDZU AME.

To the Editor of THE MEDICAL NEWS.

SIR: The inquiries received from physicians and druggists in the United States concerning midzu ame, and the attention that has of late been called to it by occasional articles in the medical press, lead me to think that a brief note on the subject may not be without interest to your readers.

Midzu ame is an extract of barley-malt and rice, in the proportion of about one part in ten, and hence may be termed a malted extract of rice. It is prepared by steaming the rice (a variety very rich in gluten called *mochigoine*) in perforated wooden boxes until fairly soft, when it is crushed and thoroughly mixed with the malt. After standing about twelve hours it is placed in hempen bags and the contained liquid forced out by strong pressure. This is then slowly evaporated to the consistence of a thick syrup, and, when ready for use, has a pale amber or amber-brown color, according to the care observed and amount of heat employed in its preparation.

Midzu ame has long been used by the Japanese as an article of diet for the sick, but not until within the last six or seven years has it been regarded as possessing medicinal properties. It is now employed as a medicine under the following conditions:

1. *In cases of indigestion arising from nervous exhaustion or infirmity.*

2. *As an adjuvant to other remedies in cases where food-medicines are required; e. g.*, with cod-liver oil emulsion, instead of barley-malt, in preparing the extractum malti ferrum, diluted with dialyzed iron, etc.

3. *As a nutrient and restorative in some exhausting diseases.* For this, a tablespoonful dissolved in hot water and added to a glass of rich milk makes a very nutritious and easily digested draught for the sick.

Very respectfully yours.

J. C. BERRY, M.D.

OKAYAMA, JAPAN, December 5, 1881.

NEWS ITEMS.

CINCINNATI.

(From our Special Correspondent.)

ARRANGEMENTS FOR THE SPRING COURSE have just been completed in both our Medical Colleges, and in both a new plan has been adopted. The didactic courses are to be recitative, instead of by the usual lecture-method. The plan appears to have many good features, and it is believed that by it the students will be stimulated to a better use of text-books, and at the same time acquire a better method of study than they would otherwise get. At the Medical College of Ohio, the Faculty have further decided to confine themselves entirely to clinical instruction, placing the didactic course in the hands of the adjuncts of the various departments.

THE COMMENCEMENT EXERCISES of the Miami College will occur Thursday evening, March 6th; those of the Ohio, Friday evening, March 7th.

A CASE OF SMALLPOX was discovered in the city last week. It is the first appearance of the disease for more than a year. The victim was a negro roustabout, who had contracted the disease in Louisville, where it has prevailed all winter. By the prompt action of the Board of Health, in sending the patient to the Pest-house, and vaccinating as many as possible of those with whom he had come in contact, no other cases have yet appeared. The Health Officer has also established a partial quarantine against Louisville. The railroads have been ordered to discontinue the transportation of rags, and officers have been stationed at the depots to inspect passengers and freight arriving from that source. It is said that the people of Louisville are much dissatisfied with such treatment, and advise that, if Cincinnati people are afraid of smallpox, they should vaccinate. But it has been only three years since the disease came to us from Louisville, and it then required nearly two years to free the city from it. During that time, too, the Health Board learned how difficult it is, in the absence of law, to enforce vaccination regulations, and for this reason they take the decisive steps referred to.

SCARLET FEVER.—A few cases of scarlet fever have also occurred. About two weeks ago, five or six inmates of the Children's Home were attacked at once. They were promptly removed, and further spread of the disease prevented.

A BILL TO REGULATE THE PRACTICE OF PHARMACY is now before the Legislature of Ohio. If passed, it will require that all pharmacists, whether graduates in pharmacy or not, be examined by a State board before being licensed to practice. It will not, however, govern those now in business. A petition urging the passage of the bill has been largely signed by physicians. Next in order should be a similar bill to regulate the practice of medicine.

THE PHILADELPHIA NEUROLOGICAL SOCIETY.—This new Society was organized last Monday evening. Its object, as expressed in its constitution, is to promote the study of Neurology in all its departments. The meeting was fully attended by those physicians of Philadelphia and vicinity who are specially interested in nervous and mental diseases.

The following officers were elected:

President.—Dr. S. Weir Mitchell.

Vice-Presidents.—Drs. C. K. Mills and T. N. Kerlin.

Secretary and Treasurer.—Dr. Jas. Hendrie Lloyd.

Council.—Drs. S. Preston Jones, Wharton Sinkler, and J. T. Eskridge.

SURGEON-GENERAL WALES.—The term of office of Medical Director P. S. Wales, as Surgeon-General of the Navy, by virtue of his office as Chief of the Bureau of Medicine and Surgery, expired last week. The name of his successor has not yet been announced.

DR. FRANK H. HAMILTON'S work on *Fractures and Dislocations* has recently had a sixth revision and translation into French at the hands of DR. G. POINSOT.

THE ILLINOIS STATE BOARD OF HEALTH.—From the quarterly report of the Secretary of the Illinois State Board of Health, we learn that during the quarter ending December 31, 1883, the Board issued certificates entitling to practise medicine under the Medical Practice Act to eighty-six graduates upon diplomas from legally chartered medical institutions in good standing, and nine to practitioners on length of practice in the State; making in all 553 practitioners of medicine admitted to practice in Illinois during the year 1883. During the same period, 163 applications have been refused, and eleven certificates have been revoked; thus directly reducing the number of practitioners by 174, through the enforcement of the provisions of the Medical Practice Act.

Among the causes for refusal to issue certificates were the following: Presenting diplomas of institutions not recognized by the Board as in good standing; unsatisfactory personal or professional antecedents, habits, or associations, warranting the charge of unprofessional and dishonorable conduct; intent to practise in an unprofessional and dishonorable manner, as by claiming to cure incurable maladies; to possess unusual skill, experience, or facilities; and similar claims involving deceit and fraud upon the public. The revocations of certificates were in all cases based upon charges of unprofessional and dishonorable conduct.

Seven certificates were issued to midwives upon the credentials of recognized schools of midwifery, and four upon examination by the Board. A total of fifty-one midwives have thus been admitted to practice during the year—twenty-five upon credentials, seven upon length of practice in the State, and nineteen upon examination. In all forty presented themselves for examination, of whom twenty-one were rejected.

BARNUM'S WHITE ELEPHANT.—Barnum's white elephant, which has arrived in London and has been lodged in the Zoölogical Gardens, has excited quite a warm controversy. Prof. Flower says that the pink patches on the animal are due to an absence of coloring pigment in his epidermis. Mr. Balmano Squire says the patches are due to a skin disease. Mr. Sanderson, Superintendent of the Government Elephant Department in Bengal, asserts that the elephant does not differ from hundreds belonging to the Commissariat of the value of £150 to £200.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending January 19, 1884, indicate that remittent fever and diphtheria have increased, and that pneumonia, tonsillitis, consumption, bronchitis, and neuralgia have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending January 19, and since, at sixteen places, scarlet fever at eighteen places, and measles at thirteen places.

NOTES AND QUERIES.

THE METRIC SYSTEM.

To the Editor of THE MEDICAL NEWS.

SIR: Several letters have appeared in your columns discussing the relative merits of the metric and our present system in prescribing. Having been educated in a German university, I first studied the decimal system, but on commencing practice in a small town in Indiana, I found myself obliged to prescribe according to the old system, as the druggists neither understood the former, nor

had they the weights for dispensing. With this experience, I can safely assert that I consider the gramme system as far the simpler and easier of the two.

One of your correspondents justly observes that practitioners must get out of the way of thinking of doses in grains, etc., and accustom themselves to think of them in grammes and decimals of grammes. The Germans originally prescribed in grains, etc., traces of which you can even now see in their prescriptions; for example, in the following:

℞.—Morph. muriat., ... 0.06 (gr. j).
Sacch, alb., ... 4.0 —M.
Divide in pulv. No. vj.

If the prescriber had never heard of the old system, he would probably have written as follows:

℞.—Morph. muriat., ... 0.05
Sacch. alb., ... 4.0—M.
Divide in pulv. No. v.

which gives the same result, 0.01 of morphia, and is more in accordance with the principles of the decimal system.

Still, I do not think that this system will ever be universally adopted, until teaspoons, dessertspoons, wineglasses, etc., are abolished. Suppose the American Medical Association, or any other high medical authority, were to cause two standard doseglasses to be made, each containing 50.0 and 100.0 respectively, and and divided into ten and twenty equal parts respectively, each part (for convenience, I will call it "measure") would then contain 5.0, a trifle more than a teaspoonful. If these glasses were made in large quantities, they could be sold by the druggist for five cents, and dispensed with the prescription. Or graduated medicine bottles might be used, as now is the case in Great Britain. I will give two examples to illustrate my meaning. Suppose you wish to give, say twenty doses of sulphate of quinine, each containing 0.1. The prescription would read:

℞.—Quin. sulph., ... 2.0 (0.1 × 20).
Acid. sulphuric. dil., ... q. s.
Syr. limonis, ... 20.0
Aquæ. dest., . . . q. s. ad 100.0 (5.0 × 20).—M.
Sig.—One measure, in water, three times a day.

A second example:

℞.—Potass. acetat., ... 10.0 (2.0 × 5).
Sp. æther. nitrosi, ... 10.0 "
Infus. buchu, . . . q. s. ad 250.0 (50.0 × 5).—M.
Sig.—Ten measures, three times a day.

Here are five doses, each containing 2.0 potass. acetat., 2.0 sp. æther. nit., and 48.0 infus. buchu. It seems to me, nothing could be simpler, and it has the advantage of being mathematically accurate. The opponents of the system seem to have the wildest ideas of its complicacy, as is shown by a prescription in THE MEDICAL NEWS of the 3d of November, 1883, p. 503. As a matter of fact, it is never necessary to make use of more than two decimal places, except in prescribing drugs with very small doses, as atropia, strychnia, etc.

The most illiterate citizen understands the decimal system when applied to dollars and cents. Is it then too much to ask that educated and scientific men, as physicians are supposed to be, should understand the same system when applied to weights and measures?

I believe the idea of graduated glasses is now being entertained in Berlin; but there is no reason why a liberal country like the United States, which has always shown itself foremost in the invention and adoption of improvements, should not take the first step, and set an example to the old world, in simplifying the present method of prescribing, and at the same time rendering it safer, more accurate, and scientific.

I am, sir, your obedient servant,

A. C. WILLIAMS, M.D.

CINCINNATI, O., January 26, 1884.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 21 TO JANUARY 28, 1884.

ALEXANDER, CHARLES T., *Major and Surgeon.*—So much of Par. 7, S. O. 211, September 14, 1883, as directs him to report in person to the Commanding General, Department of the Missouri, for duty, is revoked, and he will, upon the expiration of his present leave of absence, proceed to St. Louis, Mo., and assume duty as Attending Surgeon and Examiner of Recruits in that city.—*Par. 1, S. O. 21, A. G. O.*, January 25, 1884.

ELBREY, FREDERICK W., *Captain and Assistant Surgeon.*—Present leave of absence extended six months.—*Par. 9, S. O. 24, A. G. O.*, January 25, 1884.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FROM OCTOBER 1 TO DECEMBER 31, 1883.

BAILHACHE, P. H., *Surgeon.*—Relieved from duty at Cape Charles quarantine station, October 13, 1883. Detailed as member of Board to examine candidates for promotion October 30, 1883. Granted leave of absence for thirty days, November 27, 1883.

HUTTON, W. H. H., *Surgeon.*—Granted leave of absence for twenty days, October 1, 1883.

WYMAN, WALTER, *Surgeon.*—Detailed as member of Board to examine candidates for promotion, October 30, 1883. To proceed to Norfolk, Va., to investigate the conduct of the service at that port, December 31, 1883.

LONG, W. H., *Surgeon.*—Leave of absence extended ten days, October 26, 1883.

MURRAY, R. D., *Surgeon.*—To proceed to Ship Island quarantine station, October 17, 1883. To inspect sites for quarantine stations, November 30, 1883. Granted leave of absence for twenty days, December 18, 1883.

SMITH, HENRY, *Surgeon.*—Granted leave of absence for twenty-five days on account of sickness, October 13, 1883. Relieved from duty at Norfolk, Va., October 17, 1883. To report to Surgeon Sawtelle, at New York, for temporary duty, November 27, 1883. Relieved from temporary duty at New York, and placed on waiting orders, December 31, 1883.

FISHER, J. C., *Passed Assistant Surgeon.*—When relieved by Assistant Surgeon Banks, to proceed to New York for duty, October 29, 1883. Granted leave of absence for thirty days, November 28, 1883.

GOLDSBOROUGH, C. B., *Passed Assistant Surgeon.*—Granted leave of absence for thirty-two days, on account of sickness, October 12, October 20, and November 1, 1883.

IRWIN, FAIRFAX, *Passed Assistant Surgeon.*—To proceed to Norfolk, Va., and assume charge of the service, relieving Asssistant Surgeon Glennan, October 16, 1883.

MEAD, F. W., *Passed Assistant Surgeon.*—To proceed to Portland, Oregon, to inspect the service, and report the condition of Assistant Surgeon Devan, December 5, 1883. To return to station, Port Townsend, Washington Territory, December 18, 1883.

COOKE, H. P., *Passed Assistant Surgeon.*—To proceed to Charleston, S. C., for duty, November 27, 1883.

BANKS, C. E., *Assistant Surgeon.*—Detailed for temporary duty at Georgetown, D. C., October 11, 1883. Granted leave of absence for thirty days, October 12, 1883.

BENNETT, P. H., *Assistant Surgeon.*—Placed on waiting orders, December 15, 1883. Granted leave of absence for thirty days, December 22, 1883. Upon expiration of leave of absence, to proceed to Detroit, Mich., for duty, December 29, 1883.

PECKHAM, C. T., *Assistant Surgeon.*—To proceed to Wilmington, N. C., and assume charge of the service, relieving Passed Assistant Surgeon Irwin, October 16, 1883.

DEVAN, S. C., *Assistant Surgeon.*—Granted leave of absence for ninety-five days, on account of injury and sickness resulting therefrom, November 15, December 5 and 22, 1883.

BEVAN, A. D., *Assistant Surgeon.*—To proceed to Portland, Oregon, and assume charge of the service, December 29, 1883.

GLENNAN, A. H., *Assistant Surgeon.*—To proceed to New Orleans, La., for duty, October 17, 1883.

WASDIN, EUGENE, *Assistant Surgeon.*—To proceed to Mobile, Ala., for temporary duty, October 11, 1883. To proceed to Galveston, Texas, for temporary duty, November 17, 1883.

PROMOTIONS.

BENSON, J. A., *Passed Assistant Surgeon.*—Promoted and appointed Passed Assistant Surgeon, by the Secretary of the Treasury, from October 1, 1883, October 4, 1883.

BANKS, C. E., *Passed Assistant Surgeon.*—Promoted and appointed Passed Assistant Surgeon, by the Secretary of the Treasury, from November 1, 1883, to November 6, 1883.

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ORIGINAL ARTICLES.

THE VALUE OF INTERNAL ŒSOPHAGOTOMY IN THE TREATMENT OF CICATRICIAL STRICTURE.[1]

BY HENRY B. SANDS, M.D.,

PROFESSOR OF THE PRACTICE OF SURGERY IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK; SURGEON TO THE ROOSEVELT HOSPITAL.

My object in the present paper is to consider the value of the operation known as internal œsophagotomy; and to give the particulars of an aggravated case of stricture lately under my care, in which this procedure was carried out with a gratifying amount of success. My remarks will relate only to that form of stricture denominated simple, fibrous, or cicatricial, inasmuch as the operation in question is one of doubtful utility in cases of stricture due to the development of a malignant growth.

Simple stricture of the œsophagus is probably always preceded by inflammation or ulceration of one or more of its component layers. Systematic writers describe a number of varieties of inflammation, such as catarrhal, syphilitic, phlegmonous, and traumatic, any one of which may lay the foundation of stricture. From an etiological point of view, however, œsophageal strictures are distinguished by the fact that a vast majority of them are due to the reactive inflammation which follows contact with some highly corrosive liquid, such as sulphuric, nitric, or hydrochloric acid, or a concentrated solution of caustic potash. A consideration of the effects produced by these substances, when accidentally or intentionally swallowed, is essential to a correct appreciation of the pathology and treatment of the lesions that may ensue. These effects vary greatly in different cases, according to the amount of the liquid taken and its degree of concentration. They may be limited to a part or the whole of the œsophagus, or may also extend to the stomach. If the poison is undiluted, and the quantity large, death usually occurs soon after the injury, in consequence of sloughing inflammation of the œsophagus. The slightest lesion observed consists in a destruction of the epithelial lining, which is soon cast off and regenerated. The cases that possess a surgical interest lie between these extremes. The destructive action may be restricted to the œsophageal mucous membrane, or may involve the subjacent connective tissue, or even the muscular coat. It may be confined to a very short portion of the tube, or may extend throughout its entire length. Furthermore, it may include a part or the whole of its circumference. Accordingly, when the substance which has been destroyed and cast off is replaced by adventitious fibrous tissue, one or more strictures will result, varying in situation, character, and extent. Avoiding details which are familiar to all, or which are irrelevant to the present discussion, I would draw attention to certain points of contrast between several recognized varieties of stricture, which have an important relation to the prognosis and treatment of the disease. *Cæteris paribus*, the gravity of a stricture will be greater in proportion to its length; and when we remember that a narrowing of any considerable portion of the length of the œsophagus rarely takes place unless the corrosive action of the poison has been intense; and that the long, tubular strictures which result therefrom are usually dependent upon the production of an abundant quantity of cicatricial tissue, and are correspondingly narrow, indurated, and unyielding, as well as often tortuous, we can understand why, as a rule, such strictures are amenable neither to dilatation nor to internal division, but demand gastrostomy as the only available means of prolonging life.

Provided a stricture is permeable to instruments of moderate size, its length can usually be ascertained by the use of a bulbous bougie. The upper limit is indicated when the bulb meets with resistance before it enters the stricture, and the lower limit as it again encounters resistance on being withdrawn. Œsophageal strictures, as I have already stated, vary greatly in their longitudinal extent; and, classified according to their variations in this respect, they may, like strictures of the urethra, be spoken of as linear, annular, or tubular. Another variety of stricture is that in which the cicatricial tissue is of limited horizontal extent, so that it does not embrace the entire circumference of the œsophagus. It may thus form a more or less rigid, valve-like projection against the opposite unaltered wall, causing the orifice of the stricture to have an eccentric position. Trélat,[1] in 1870, proposed to diagnosticate this peculiar condition by means of a demi-bulbous bougie, whose expanded extremity is flat on one side and convex on the other. By introducing the bulb beyond the stricture, and presenting its convex surface toward different parts of the circumference of the œsophagus while making successive attempts to withdraw it, the situation of the callous deposit may be determined by feeling the greater resistance which it opposes to the withdrawal of the instrument. The practical application of the information thus obtained will presently be apparent.

Perhaps I can adopt no better plan of stating my own views regarding the value of internal œsophagotomy as a surgical expedient than by combining them with the record of a case in which I have recently performed the operation.

Addie B., aged eight years, came under my care on January 10, 1883, having been sent to me by

[1] Read before the New York Surgical Society, Jan. 22, 1884.

[1] Bulletin de Thérapeutique, Paris, 1870, p. 262.

Prof. William H. Doughty, of Augusta, Ga., in the hope that something might be done to relieve her of an œsophageal obstruction which had been caused by the accidental swallowing of a mouthful of a strong solution of caustic potash, on September 27, 1882. No alarming symptoms immediately followed the accident, but deglutition was always afterward more or less difficult and painful, rendering necessary a fluid diet, which consisted chiefly of milk. Dysphagia began to be severe early in November, and was attended with rapid emaciation, the child's weight having been reduced from forty-four to forty-one pounds in the week ending November 16. Subsequently a slight improvement took place, but toward the end of December the patient's condition grew very alarming, and it was found necessary to resort to rectal alimentation. Early in January, dilatation of the stricture was attempted; no progress was made, however, and fearing that the child's situation might at any time become desperate, Dr. Doughty recommended that she should be brought to New York for the purpose of being benefited, if possible, by surgical treatment. At the time of my first visit, on January 10, I found her very weak, emaciated, and dejected, and evidently threatened with death from starvation. Deglutition had become almost impossible, and the rectum had become somewhat intolerant of enemata. On exploring the œsophagus, I discovered a tight stricture, situated nearly opposite to the middle of the sternum, at a distance of eight and a half inches from the incisor teeth. The stricture was impassable to instruments, and the daily attempts I made to penetrate it were unsuccessful, until January 16, when I was able to introduce a filiform whalebone bougie, having a diameter of two-thirds of a milimetre. During the ensuing five months, dilatation was practised almost every day, but made very slow progress, as is shown by the following record:

January 23.—Passed an elastic bougie, No. 6.
February 1.—Passed No. 9.
22d.—Passed No. 11.
28th.—Passed No. 12.
March 15.—Passed No. 13.
April 11.—Passed No. 14.
27th.—Passed No. 15.
May 8.—Passed No. 16.
28th.—Passed No. 17.

On February 1, I succeeded in introducing an elastic catheter, having a diameter of three millimetres, which proved large enough to allow the injection of milk into the stomach, whenever the child was unable to swallow. Until this time her condition had been extremely precarious, and the question of performing gastrostomy was more than once debated. But, on the one hand, the patient seemed too feeble to bear the operation; and, on the other, her father's repugnance to such a procedure was invincible. Later, the dysphagia diminished, so that she was able to swallow an abundance of fluid food, consisting of milk, soup, and raw eggs; and towards the end of May it was found that she had gained twelve pounds in weight since her arrival in New York. Nevertheless, it had meanwhile become evident that the stricture was of the most obstinate character; for, whenever a single day passed without an attempt to dilate it, a contraction would take place, rendering necessary the use of smaller instruments, the employment of which sometimes caused considerable pain. Being convinced that future treatment by dilatation would be useless, and perhaps dangerous, by allowing accidental injury to the œsophagus, I decided to resort to internal œsophagotomy, as the most promising expedient under the circumstances. I was encouraged to anticipate success from the operation in the present case, especially in view of two considerations: *First.* I had ascertained by careful exploration, made with demi-bulbous bougies, that the stricture was due to the pressure of a narrow ring of fibrous tissue, occupying only a quarter of an inch of the length of the canal. *Second.* On introducing beyond the stricture an instrument which I designed for the purpose of examining the deeper parts of the œsophagus, and which is constructed on the same principle as Dr. Weir's urethrometer, I found that when the bulb was expanded to its utmost limit, No. 28 (F.), no other contraction could be detected. Accordingly, it appeared probable that great benefit must result from internal division of the stricture, provided this could be safely accomplished. But the operation is well known to be hazardous; and perhaps, for this reason, it has been rarely undertaken since it was performed for the first time by its inventor, Maisonneuve, in 1861.[1] Mackenzie,[2] who published, a few months ago, an interesting article containing the statistics of internal œsophagotomy, was able to cite only eleven cases in which the operation had been performed for cicatricial stricture; and of these, three, or 27.27 per cent. proved fatal. The operation is condemned by many surgical writers, and is not even mentioned in some of our popular text-books. When we reflect, however, that the natural termination of the disease is death by starvation; that there are many cases like the one herewith reported, which baffle the most patient attempts at dilatation; that the operation required to establish an artificial opening in the stomach for the purpose of feeding is one which is likewise dangerous, and which, even when successful, places the patient in a deplorable condition, and cannot be contemplated without some feeling of disgust; and that, finally, internal œsophagotomy is an operation which aims to reëstablish a function so important as that of deglutition, we must acknowledge that it merits the most attentive study, with the view of determining the class of cases to which it is applicable, and of adopting the safest and most efficient method of performing it. Undoubtedly, the cases most favorable for the operation are those in which there is only a single stricture, of slight longitudinal extent. Conversely, little hope of benefit from it can be entertained when the stricture is long, tortuous, and indurated. We notice here a close analogy between strictures of the urethra and those of the

[1] Maisonneuve, Clinique Chirurgical, Paris, 1864, tome ii. p. 409.
[2] American Journal of Medical Sciences, 1883, vol. i. p. 420.

œsophagus. In bad cases of urethral stricture, however, which are not curable by internal division, we can often resort with success to external urethrotomy; while external division is a procedure very rarely adapted to œsophageal strictures, on account of the usually inaccessible situation of the affected parts.

The dangers of internal œsophagotomy depend on the important relations of the gullet. In different parts of its course it is in close proximity to the pneumogastric and the recurrent laryngeal nerves, the trachea, the left bronchus, the pericardium, the aorta, the azygos vein, and the pleura. The loose connective tissue behind the œsophagus is prone to suppurate when injured, or when food or other irritating substances come in contact with it. Some of the risks attending the operation may be gathered by a perusal of the recorded cases. In Maisonneuve's hands, two proved fatal from peritonitis, apparently not dependent on the operation, as, at the autopsy, the incisions were found not to have passed beyond the limit of the callous tissue, while the surrounding parts were free from inflammation. Braun[1] conjectures that in both these cases the stomach may have been accidentally perforated by the metal conductor which forms a part of the œsophagotome, although Maisonneuve alleges that no such perforation could be discovered on careful examination. Trélat's[2] patient had severe hemorrhage after the operation; and death, in a case related by Schilz, was probably due to this cause. In Czerny's case, the incision doubtless perforated the œsophagus; for emphysema of the neck was noticed a few hours subsequent to the operation, and, after death, a large abscess was discovered in the posterior mediastinum, communicating with the œsophagus and with the right pleural sac. Likewise, in a fatal case recorded by Mackenzie, pneumonia supervened soon after the operation, and at the autopsy a purulent collection was found in the right pleura. Omitting further allusion to Maisonneuve's cases, in which there is no demonstrable connection between the fatal event and the operation, it is evident that the chief danger of internal œsophagotomy is either that of accidentally cutting the healthy vascular tissue, thereby causing hemorrhage, or of making the incision so deep as to injure one or more of the important parts with which the gullet is in relation. An ideal operation, therefore, would be one in which the cicatricial tissue alone is divided, and in which the periœsophageal structures are left intact. We are thus left to examine the different methods which have been employed, in order to ascertain to what extent these requirements have been fulfilled.

Maisonneuve's instrument is similar in principle to his well-known admirable urethrotome. It has a conductor, consisting of a slender, flexible bougie, to which is attached a flattened steel guide, four millimetres in breadth, and grooved on opposite sides to receive the blades. The latter are two in number, each one being twelve millimetres in breadth, of triangular shape, and having a cutting edge limited to its anterior third, the remainder being quite blunt. The guide having been introduced through the stricture into the stomach, one of the blades, the edge of which is directed laterally, is passed slowly and gently along the conducting groove until it reaches the stricture, when it is advanced with a sufficient degree of force to overcome the resistance. The second blade is then introduced in the same manner, making an incision through the opposite side of the stricture; finally, the entire instrument is carefully withdrawn.

Studsgaard employed an instrument resembling Maisonneuve's, but having a concealed double-edged blade.

Lannelongue's œsophagotome also resembles Maisonneuve's, but has only a single blade, which is protected by a sheath. The projection of the cutting edge is fifteen millimetres.

Trélat invented an instrument by which he divided the stricture by cutting from below upward. It is provided with two blades, each one being four centimetres in length, concealed within a metal tube four millimetres in diameter and six centimetres in length. By turning a screw in the handle of the instrument, the blades can be projected to any distance not exceeding two centimetres. Owing to the length of the blades, they have a very gentle slope, which facilitates their passage through the tissues that require to be divided.

Dolbeau operated by the retrograde method, using an instrument provided with a conical tip, in which were concealed two lateral cutting blades. The bulb was made just large enough to pass through the stricture, and the blades could not be projected beyond the diameter of the cone.

Czerny and Mackenzie have also performed the retrograde operation with instruments of their own invention, each one being furnished with a single blade.

On comparing these several instruments, it will be found, in the first place, that some are arranged so as to cut from above downward, while with others the incision is made from below upward. Recent writers have usually, and perhaps rightly, condemned all instruments belonging to the former category; but their objections do not seem to me the strongest that might be offered. Whether the incision is made from above downward, or in the contrary direction, is of itself a matter of little moment. It has been said that when the incision is made by thrusting the knife downward, the œsophageal wall below the stricture is especially liable to be perforated; but I cannot understand why this should happen without carelessness on the part of the operator, nor am I acquainted with any clinical or pathological evidence in support of the assertion. The great disadvantage of the anterograde operation seems to be the necessity of introducing a sharp metallic guide considerably beyond the stricture before the blade can be safely used. This manœuvre was found to be extremely difficult by both Maisonneuve and Lannelongue, and must be attended with no slight risk of causing perforation. In operating by the retrograde method, this danger is diminished by the flexibility of the in-

[1] Czerny; Beiträge zur Operativen Chirurgie, p. 76.
[2] Bulletin de Thérapeutique, 1870, p. 259.

strument employed, as well as by the circumstance that its extremity can be made blunt, and need not be introduced far beyond the seat of stricture. On the other hand, in the case of a stricture of very small calibre, Maisonneuve's operation would have the advantage that it could be performed with a guide not exceeding two millimetres in diameter; while an instrument intended to cut from below upward can hardly be made with a diameter less than four millimetres.

A second difference to be noticed is, that some instruments are provided with only a single blade, while others have two blades so arranged as to cut on opposite sides. There can be no doubt that the safety of the operation is increased when only one blade is employed, which can be directed with precision toward any part of the circumference where division of the cicatricial tissue is indicated.

The last and most important contrast to be observed, is the different depth to which the incision is extended, or may be extended, with different instruments. This is very great, Dolbeau's instrument, for example, being so constructed as to permit of mere scarification; while in that employed by Trélat, the distance between the cutting edges of the two blades, when fully projected, is two centimetres. In endeavoring to estimate the relative value and safety of shallow and deep incisions in the treatment of stricture of the œsophagus by internal division, we must take into account certain facts revealed by pathological anatomy. It is well known that, in strictures of equal calibre, the thickness of the fibrous material on which the constriction depends varies greatly in different instances. Thus, a stricture which will admit only a filiform bougie may be owing to the presence of a narrow ring of cicatricial tissue, not exceeding one or two millimetres in thickness; while in another stricture of the same calibre, the thickness of the constricting band may exceed a centimetre. It is evident that in the former case a shallow incision would relieve the constriction, and that in the latter a deep incision would be required for the same purpose. It is also plain that, in the former case, a deep incision would be liable to extend beyond the outer circumference of the œsophagus. Indeed, this accident occurred and proved fatal in Czerny's patient, although the incision was only two millimetres in depth. Unfortunately, we have no means of determining in the living subject the exact thickness of the callous deposit, and are consequently left in uncertainty regarding the needful depth of the incision in any given case. A shallow cut may be useless; a deep one may be fatal. Notwithstanding our want of knowledge as to the condition of the diseased parts, we may, I think, proceed in such a manner as to overcome the constriction without subjecting the patient to any extraordinary risk. As, in spite of every precaution, the edge of the knife may possibly be directed against some part of the œsophagus which has undergone no morbid change, the depth of any single incision ought to be a trifle less than the thickness of its coats, which sometimes does not exceed two millimetres. Assuming that the stricture is annular, we may make a superficial incision at any point of its circumference, and afterward endeavor to effect dilatation by the introduction of sounds. If we have succeeded in dividing the whole, or even the greater part, of the constricting band, rapid improvement will probably follow. Should little or no benefit result from the first incision, a second one may be made at some other point, where perhaps the ring may be thinner and less resistant. In case this fails to cause improvement, still another point may be selected for incision, with perhaps a more fortunate result; or it may be found expedient to make a number of incisions in the same plane. Much has been said respecting the comparative safety of cutting in different directions; some operators preferring to cut toward the right side, some toward the left side, while others regard a posterior incision as the only proper one. The relations of the œsophagus vary so considerably in different parts of its extent, that it is impossible to lay down any rule which would apply to all cases. Perhaps, in a general way, it may be affirmed that an anterior incision is the most hazardous, and a posterior one the least so; but if we adopt the precaution of avoiding incisions of sufficient depth to penetrate the entire thickness of the œsophageal wall, we may turn the edge of the knife toward any point without running much risk of wounding important parts.

The most difficult problem connected with the operation is that of exactly regulating the depth of any given incision. I believe that this can be done only by distending the stricture at the time when the knife is applied to it. On this principle I have devised the simple œsophagotome represented in the accompanying figure.

The shank of the instrument, which is fifteen and a half inches in length, and four millimetres in diameter, is a flexible tube made of narrow spiral steel plate, secured within by two pieces of fine wire in order to prevent separation of the spiral coil. The instrument is provided with a variable number of steel bulbs, each bulb being furnished with a corresponding knife-blade. The bulb is firmly fastened by a screw to the distal end of the shank, and the knife is attached to an inner flexible steel rod, manipulated by a thumbscrew at the proximate end of the instrument. By turning this screw, the knife is drawn out from its concealed position within the bulb, the back of the blade sliding over a firm inclined plane. An index on a dial plate indicates the amount of projection of the blade, the maximum projection being two and a half millimetres. A small sliding ring on the spiral

tube is used to indicate the distance of a stricture from the incisor teeth. I selected the metallic spiral tube for the shank of the instrument because it combines flexibility with strength. The bulb being conical, the operator can readily perceive when it comes in contact with the stricture, before he projects the blade. In operating, a bulb must be employed which exactly fits the stricture; the depth of the incision will then just equal the distance to which the blade is projected by the action of the screw in the handle.

The subsequent progress of the case may be given in the following brief extracts from my note-book:

June 15.—Stricture contracted to 15 (F.). Introduced œsophagotome with bulb No. 15. Passed bulb-joint beyond the stricture; projected blade two and a half millimetres, and incised the resisting tissue in the posterior median line. The operation was nearly painless, and only a few drops of blood followed the incision. The wound was allowed to remain undisturbed for twenty-four hours, the patient meanwhile being nourished by rectal enemata. These seemed to cause pain in the abdomen, and were therefore discontinued on the day after the operation, the child being permitted to swallow milk, which she did without pain. On the same day dilatation was resumed, and the stricture was found to admit No. 19.

26th.—Daily introduction of elastic bougies since the last date has failed to accomplish any further dilatation. Incised stricture on right side to a depth of two millimetres, using bulb No. 19.

29th.—Nothing having been gained by the last operation, the same instrument was introduced, and an incision, two and a half millimetres, was made obliquely backward and toward the left side. Considerable resistance was offered to the knife, and much soreness followed the operation, rendering dilatation unusually painful. Although a very few drops of blood escaped when the incision was made, the bougies used during the succeeding week were always found stained with blood on being withdrawn.

July 12.—Dilatation arrested at 23. Arming the œsophagotome with a bulb of this size, introduced it as before, and made an incision, backward and toward the right side, two millimetres in depth. The knife encountered very little resistance, and the operation was followed by slight hemorrhage, the blood expectorated being about half an ounce.

23d.—Dilatation has reached No. 26, and patient is allowed for the first time to take solid food, which she swallows without difficulty. It may be remarked, incidentally, that no subsequent trouble was experienced in swallowing ordinary food.

August 1.—Dilatation has not gone beyond No. 27. With bulb of this size made an incision in posterior median line; depth two millimetres.

20th.—Dilatation reached 31 on August 12, but treatment having been suspended for a week, it was ascertained that the stricture had contracted to 27. To-day, using instrument with bulb 27, incised in posterior median line to a depth of two millimetres. I had now determined to make all the incisions that might be required, as far as possible, in the same plane, with the object of gradually and safely effecting a complete division of the stricture tissue, or of rendering it so thin that it would offer no obstacle to dilatation.

October 7.—Limit of dilatation, 34. Since last date, treatment was once suspended for eighteen days, when contraction took place from 34 to 26. Made an incision in posterior median line with bulb 34, projecting the blade two millimetres.

31st.—Dilatation reached 39, beyond which point it was not thought best to carry it.

November 19.—Patient started for home, being in excellent health, and weighing sixty-two and a half pounds, a gain of twenty-one and a half pounds since treatment was commenced, nine months ago.

In a letter dated January 4, 1884, Dr. Doughty writes that "there is no evidence of a tendency to recontraction, and the function of the œsophagus is as perfect as it was before the injury was inflicted." Bougies are still employed, however, in the hope of obtaining a radical cure. I have neglected to state that, before the child left New York, there were signs of catarrhal inflammation in the neighborhood of the stricture, the bougies when withdrawn being stained with a little pus. This symptom has since disappeared.

I am not willing to assert that, in the case I have narrated, a permanent cure has been effected; but I think it may be affirmed that the treatment pursued has been successful in preserving the child's life, and in restoring her to comparative health and comfort. Should dilatation fail to prevent recontraction, I would not hesitate to resort again to internal œsophagotomy.

The limit of this paper forbids any attempt to consider fully the general subject of treatment of cicatricial narrowing of the œsophagus; yet a brief enumeration of the several methods at our disposal may be profitable, by helping us to estimate the relative value of the operation now under discussion.

1. Gradual dilatation is usually, and in my opinion, justly regarded as the safest and best mode of treatment, wherever it is practicable. It is much to be regretted that this method is not always resorted to as a preventive measure, or in the incipient stage of the disease, before cicatrization has taken place. It is a fact, however, that the surgeon's aid is rarely sought until a stricture has become narrow, and deglutition difficult. I have little doubt that, in many cases, the formation of a stricture might be obviated by the frequent introduction of a full-sized bougie while the healing process is going on; and I believe it should be the rule to commence such treatment within a week or ten days after the injury has been received.

If a stricture is impermeable to instruments, dilatation is of course impossible; but, even when bougies can be readily inserted, dilatation is not always successful, as some have maintained, in restoring the distensibility of the contracted parts. This fact is well shown in the case I have described, in which this treatment was faithfully pursued during the long period of five months. Nor is the introduction of dilating instruments always safe,

especially when the stricture is narrow. I am able to recall two cases occurring in my own practice, in which an abscess was caused by what I thought at the time to be a cautious use of an elastic bougie. One of these patients recovered; the other died, the fatal event being partially attributable to an accidental perforation of the œsophagus, which led to deep-seated suppuration. A similar accident occurred in the hands of Maisonneuve, who perforated the œsophageal wall with a hollow sound; and, believing that the instrument had entered the stomach, he injected a quantity of beef-tea into the posterior mediastinum, causing the patient's death on the following day.

Finally, treatment by dilatation often requires to be continued indefinitely, in order to prevent recontraction; and, as in the case of urethral stricture, persons suffering from stricture of the œsophagus are notoriously prone to neglect themselves, avoiding dilatation until it becomes difficult or impossible.

2. I have already stated at some length what I believe to be the indications for performing internal œsophagotomy. The operation has been too warmly advocated by some who have succeeded with it, and too often depreciated by others who lack the experience needed to give weight to their opinions. The number of cases in which the operation has been performed is so small that its value cannot be determined by statistics; but the recovery of nine out of twelve patients in whom this procedure has been carried out with beneficial results, suffices to shield it from condemnation, and to claim for it serious consideration. The case I have recorded is an example of the class in which the operation may be regarded as proper. When the stricture is narrow, yet permeable; is of slight longitudinal extent, not exceeding, perhaps, a centimetre, and cannot be dilated to a size sufficient to permit easy deglutition, I believe the operation of internal œsophagotomy to be the most hopeful expedient at present within our reach. I admit that it cannot be performed without some risk, which, indeed, it may be impossible to estimate; but this is warranted by the hopeless character of the disease, and by the results of the alternative operation of gastrostomy. Perhaps the dangers attending it may be diminished by proceeding in the cautious manner I have described, so as to avoid injuring any of the important parts which lie outside of the œsophagus. The amount of benefit to be derived from the operation will depend on the form and extent of the existing lesion. If the stricture is occasioned by a narrow ring of fibrous tissue, or by a valve-like membrane, a radical cure will probably ensue when this has been divided.[1] In most cases, however, the operation will prove only an aid to dilatation, rendering this practicable, and perhaps occasionally successful in accomplishing a radical cure. In proportion to the length and induration of the stricture, the utility of internal œsophagotomy will diminish, and in many cases it would be obviously unwise to attempt it.

[1] Vide Case by Roe, New York Med. Record, vol. xxii. p. 538.

3. Boeckel[1] has recently reported two cases of impermeable stricture which he claims to have cured by electrolysis. An œsophageal tube, armed at its distal extremity with a small ball of copper, was introduced down to the stricture and then connected by means of a wire with the negative pole of a galvanic battery; the plate connected with the positive pole being placed over the eighth rib, a little to the left of the spinal column. In one case, after three applications of from two to five minutes' duration, a bougie, No. 13, was passed through the stricture, which, after the tenth application, readily yielded to dilatation. In the other case, a bougie No. 6 entered the stricture after a single application, large bougies passing at every subsequent sitting. I am unable to determine the value of this novel method of treatment, but am inclined to consider as dangerous any such attempt to penetrate a stricture which will not admit a guide.

4. Strictures situated in the region of the neck, which are either impassable or cannot be dilated, have been sometimes treated by external œsophagotomy, the operation having usually been undertaken with the view of establishing a fistula through which the patient may be fed by means of a stomach-tube introduced through the fistula, and into the stomach. Mackenzie[2] has collected five cases, in four of which the operation was followed by death at periods ranging from twenty-two hours to eight days. The fifth patient (Bryk's)[3] is reported as having been alive at the end of seven weeks. A later account of this patient, however, is given by Von Mosengeil,[4] who states that the case terminated fatally, from pyæmia, six months after the operation. In this case the œsophagus was opened above the stricture, which was three and a half centimetres in length, and was situated just below the level of the upper border of the sternum. It was treated by dilatation, and could be passed only by instruments introduced through the fistula; these caused severe pain, frequent hemorrhage, and finally a deep-seated abscess. In another case (Horsey's)[5] the œsophagus was likewise opened above the stricture, which was found to be impassable. No encouragement, therefore, is offered to repeat this operation with the object of establishing a permanent fistula, as there is no certainty that an opening can be made below the seat of obstruction. If the patient is doomed always to be fed through an artificial opening, gastrostomy is the operation which should be selected, as it secures a ready access to the alimentary canal below the stricture, and places the fistula in a situation where it can be easily hidden from view.

But evidence can be brought to show that external œsophagotomy may be of great service by enabling us to deal successfully with strictures that are impermeable to instruments introduced through the mouth. Within the past year Gussenbauer[6] has

[1] Gazette Médicale de Strasburg, 1883, No. 2.
[2] Am. Journ. Med. Sc., April, 1883, p. 420.
[3] Centralblatt für Chir., 1878, p. 80.
[4] Wiener medicin. Wochenschrift, 1877, Nos. 40–45.
[5] Am. Journ. Med. Sc., January, 1876, p. 114.
[6] Zeitschrift für Heilkunde, Bd. iv, 1883, p. 33.

published an account of two cases of deep-seated stricture, in which he achieved success by a method he calls combined œsophagotomy. The first case was that of a woman, twenty-six years old, who suffered from a tight stricture caused by swallowing sulphuric acid. The stricture extended from the cricoid cartilage to the bifurcation of the trachea, and at the time of the operation was impassable to all instruments introduced through the mouth. The œsophagus was laid open by an external incision; and, when the margins of the wound were held apart, the operator passed a probe downward a distance of eight centimetres, when it was arrested at the point of greatest constriction, opposite the tracheal bifurcation. He finally succeeded in passing through the stricture a probe one millimetre in diameter, and then a very fine grooved director, upon which, with a narrow-bladed herniotome, he incised the cicatricial tissue in two directions, namely, forward toward the right, and forward toward the left side. An elastic catheter, eight millimetres in diameter, was now introduced through the wound and into the stomach, and was retained until the fifth day, for the purpose of increasing the dilatation of the stricture, and of injecting fluid food. It was then removed, and, until the fistula closed—three weeks after the operation—the patient was fed by means of a stomach-tube introduced through the mouth. A week later, when she left the hospital, she could swallow solids without difficulty, and could herself readily pass a bougie twelve millimetres in diameter. Neglecting to follow the advice she had received, to continue treatment by dilatation, she returned to the hospital three months subsequently in the same condition as that first described; so that the operation had to be repeated. The wound in the neck healed at the end of three months; and, when the patient was last seen—fourteen months after the operation—the stricture admitted a bougie twelve millimetres in diameter. During this interval, however, she had suffered considerably in consequence of failure to practise frequent dilatation; and it seemed probable that this treatment would be required indefinitely, in order to guard against a recontraction.

The second case was that of a child, two and a half years old, who had become greatly reduced in consequence of a stricture due to the action of carbolic acid, which had been swallowed two weeks after birth. Before the operation, a bougie, three millimetres in diameter, was arrested at a point one centimetre below the cricoid cartilage. One, two millimetres in diameter, descended to the level of the manubrium sterni, while no instrument could be made to enter the narrow constriction which was near the cardiac orifice. By an operation like the one already described, the stricture was incised; the incision in the cardiac stricture, which lay nine centimetres below the opening in the neck, being two millimetres in depth, and six millimetres in length. The external wound closed in thirty-five days; dilatation was practised; and when the child was discharged from the hospital, a week afterward, she was able to swallow solid food, and a bougie having a diameter of ten millimetres could be passed into the stomach. After the lapse of a year, when the case was reported, the patient still remained well, dilatation being continued by passing bougies once a week.

A third case, in which a similar operation was successfully performed, has just been recorded by Bergmann.[1] In this instance the stricture, which was caused by the action of oxalic acid, was situated in the neck at the level of the third tracheal ring. The patient was an adult; and, although before the operation the stricture appeared to be impermeable, it was successfully penetrated after the parts were exposed to view, and the division of a valvular cicatricial fold with a tenotomy knife enabled the operator to pass a full-sized œsophageal bougie into the stomach. The opening in the neck healed at the end of five weeks, and the patient, when exhibited three months after the operation, at a meeting of the Berlin Medical Society held last October, was able to pass easily a full-sized bougie.

5. Gastrostomy, when performed merely with the intention of establishing permanently an artificial opening in the stomach, is at present regarded with considerable favor; but it can never be anything more than a last resort in cases otherwise hopeless. Alsberg's[2] statistics, which are the most complete I have been able to find, show that gastrostomy has been performed in nineteen cases of cicatricial stricture. Ten of these patients died within the first few days, mainly from peritonitis; four survived, respectively, seven, eight, fifteen, and eighteen months; while five were supposed to be living at the time of the report. Probably these are the cases alluded to by Lefort,[3] who has recently said that five persons were known to be alive at the following periods after operation, namely, four and a half months, eight months, twenty months, two years, and three years. These results justify a resort to the operation in certain cases; and it is reasonable to hope that, with increasing experience, the percentage of mortality attending it may be considerably reduced.

6. Finally, within the past year, Bergmann[4] has achieved a brilliant success in the treatment of a deep-seated stricture by a method which is both ingenious and original. Already Schede had proposed, and Trendelenburg had attempted, but in vain, the dilatation of an œsophageal stricture by means of instruments introduced through a gastric fistula previously established. Bergmann's patient was a man, forty years of age, who had an impassable stricture forty centimetres from the incisor teeth, due to the action of caustic potash. Gastrostomy was performed on January 29, 1883, and recovery took place without accident; but it was found impossible to prevent a constant escape of the contents of the stomach, and the patient's condition seems to have been very miserable. It was therefore determined to attempt the removal of the stricture. After several trials, the œsophagus was successfully explored by introducing a sound through

[1] Deutsche med. Wochenschrift, October 24, 1883.
[2] Langenbeck's Arch., vol. 28, p. 75.
[3] Gazette des Hôpitaux, xl., 1883, p. 714.
[4] Deutsche med. Wochenschrift, October 24, 1883.

the mouth while the forefinger was pushed upward through the cardiac orifice; a membranous septum was then discovered, separating the sound from the finger. This was too thick and firm to allow safe and easy perforation by the sound; while the close proximity of the heart and the descending aorta forbade an attempt to divide it with a knife. The obstructing membrane was at last safely perforated by the compressing action of a metal clamp, the blades of which were passed through the cardiac orifice to the seat of stricture, and made to grasp the end of the sound, this being pressed against the septum so as to bring it between the jaws of the clamp. Perforation having been accomplished, the opening was dilated, at first with pieces of compressed sponge, and afterwards with sounds, until it admitted a bougie one inch in diameter. On May 21, the artificial opening in the stomach was closed by a plastic operation, the function of deglutition having been completely restored. The patient, when exhibited on October 10, was in excellent health, and was able to introduce a full-sized sound into the stomach. Meanwhile, treatment by dilatation was being continued.

On reviewing the whole subject, we may conclude that certain forms of œsophageal stricture, which have heretofore proved unmanageable, are no longer beyond the reach of surgical art; and that, in some of these, internal œsophagotomy is capable, not only of saving life, but also of reëstablishing the function of deglutition, so essential to its enjoyment.

MEDICAL PROGRESS.

TREATMENT OF CANCER OF THE RECTUM.—At the close of a recent lecture on this subject, PROF. TRÉLAT drew the following conclusions:

1. Cancers of the rectum which do not cause accidents should be left alone.

2. Cancers of the very extremity of the rectum, or of the margin of the anus, should be extirpated.

3. Accidents should be treated as they arise, but palliative measures are to be avoided. In this respect, he is in accord with Prof. Verneuil, but opposed to many English surgeons.

4. When the finger can be passed beyond the cancerous mass, rectotomy should be performed, otherwise not; but a way of derivation should be made by lumbar colotomy or by forming an inguinal anus.—*Revue de Thérap.*, January 15, 1884.

TREATMENT OF BUBOES.—M. KEMPEN recommends multiple punctures with a lancet, plunged deeply into the bubo. The punctures should be made early. The result is very gratifying; in many cases, even before pus forms, the inflammatory tension disappears, and resolution proceeds rapidly. In case pus has formed, it is pressed out, and an injection of a 1–12 solution of chloride of zinc made into the bubo. A dressing of dry charpie is used.

When the bubo has already reached the suppurative stage, it is punctured as in the above-described manner, but not freely incised, and after being thoroughly washed with carbolized water, two and a half per cent., the solution of chloride of zinc is injected, and dry charpie applied as before. The dressings are used three times a day.—*Revue de Thérap.*, January 15, 1884.

PARENCHYMATOUS INJECTION OF ERGOT IN SPLENIC ENLARGEMENT.—FENOGLIO recommends the injection of ergot in cases of splenic enlargement due to malaria. He recommends Bonjean's ergotin, dissolved in hot water, injected before the midday meal, while the stomach is empty.—*Centralbl. f. d. med. Wissensch.*, December 15, 1883.

SYPHILITIC FEVER.—DR. DUFLOCQ relates (*La France Méd.*, August 30, 1883) the history of a young man, twenty-five years of age, who was admitted to a hospital suffering from a fever. The attack had begun eight days previously with headache and vertigo followed by vomiting, after which fever and diarrhœa came on. There was also epistaxis a few days later. On admission the patient presented nearly all the symptoms of typhoid fever; the tongue was white; there was tenderness on pressure in the right iliac fossa, though the belly was not tympanitic; the spleen was slightly enlarged; heart and lungs were healthy. The temperature was 104.7°. The eruption of rose-colored lenticular spots was confluent over the abdomen, and very thick over the arms, legs, and thorax. They were large, slightly elevated, and disappeared momentarily on pressure. It was the great extent of this eruption that excited suspicion and led to further examination. A cicatrix resting upon an indurated base was found upon the glans penis, and there were enlarged glands in the groin. Mucous patches were discovered in the mouth and fauces. The patient was placed upon ordinary antisyphilitic remedies, and the fever and eruption disappeared in about two weeks. Dr. Duflocq mentions, as of diagnostic value in the differentiation of typhoid from syphilitic fever, the early appearance (third or fourth day) and the abundance of the eruption.—*Practitioner*, January, 1884.

SALICYL-RESORCIN-KETONE.—Salicyl-resorcin-ketone is a compound which is formed when salicylic acid and resorcin are heated together to 195° or 200° C., and, as might have been expected, it shares to some extent the antiseptic and antipyretic properties of the bodies from which it is prepared. According to HERR REPOND (*Zeitsch. der Allgem. öst. Apoth. Ver.*, xxi., 502), in small quantities it is less powerful as an antiseptic than either salicylic acid or carbolic acid, its action being to limit the development of, rather than to kill, the septic germs. It is, however, non-poisonous, repeated doses of two grains having been administered without inconvenience; it has been found useful for surgical dressings, and has been given to the extent of three or four grammes daily in typhoid fever without producing any unpleasant symptoms. Salicyl-resorcin-ketone is soluble in 1000 parts of water at 40° C., soluble with difficulty in hot water, and easily soluble in glycerine and alcohol. It melts at 133° to 134° C., gives when in solution a red-brown color with perchloride of iron, smells faintly aromatic, and has a not disagreeable taste. The corresponding compound with phenol, salicyl-phenol-ketone, is still less active as an antiseptic, and is more insoluble, but is said to be non-poisonous even in ten-grain doses.—*Lancet*, January 5, 1885.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

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SATURDAY, FEBRUARY 9, 1884.

THE MODERN OPERATION FOR THE RADICAL CURE OF HERNIA.

PROFESSOR CZERNY, of Heidelberg, in 1879, published an account of his method of effecting a so-called radical cure of hernia, which consists of exposure of the sac by a free incision under antiseptic precautions, of reducing the protruded parts, of isolating the sac from the surrounding structures, including its neck in a catgut ligature, and cutting away the remainder, of returning the stump into the abdomen, and, finally, of uniting the refreshened edges of the ring with the continued catgut suture. This procedure includes two distinct operations. Uniting the edges of the ring with silver sutures was first done by the elder Gross, as we learn from his *System of Surgery*, 5th ed., p. 579, in a case of large scrotal hernia at the Philadelphia Hospital, in 1861, with a successful issue. The other step, namely, ligation of the neck of the sac and extirpation of its fundus, originated, in 1876, with Riesel, who described it in the *Deutsche medicinische Wochenschrift*, Nos. 38 and 39, 1877.

Ligature of the neck of the sac, with excision of the fundus and stitching together the margins of the abdominal opening, appears to be freely and successfully practised by the surgeons of Liverpool. In the debate which followed the reading of a paper upon this subject at the Medical Institution of that city, by DR. HAMILTON, which may be found in the *Medical Times and Gazette*, for December 29, 1883, and the *Lancet*, for January 5, 1884, the fact was elicited that it had been done by Mr. Banks between fifty and sixty times, by Dr. Alexander thirty times, by Mr. Parker twenty-eight times, and by the Surgeons of the Northern Hospital fourteen times, and, strange to say, without a single death. As a rule, catgut was employed for the neck of the sac, and silver wire for the pillars of the ring.

This operation is applicable to all kinds of hernia, reducible or irreducible. According to Mr. Banks, it should not be performed in young children, unless the opening is very wide, or the child is unable or dislikes to wear a truss. In adults, it is especially useful when there is adherent omentum in the sac, and in hernia complicated with undescended testicle, conditions in which a truss is ineffectual. In cases of this description, the omentum or testicle should be removed. In ordinary examples of reducible hernia, it is contraindicated, unless life is rendered miserable by the disease, or the subject is rendered unfitted for work. The patient should remain in bed for at least three weeks after the operation, and wear a light truss afterwards for additional security; but in none of Mr. Parker's cases was a truss applied, and some of the subjects were up within a week, as he does not think that recurrence of the hernia is referable to the absence of such precautions.

The modern operation for rupture is one of expediency, not one of necessity. It may be resorted to directly for curative purposes, or as a part of the operation for strangulated hernia. Hence, in estimating its merits as to safety, the former class of cases can alone be taken into account, as it in nowise increases the dangers of the latter class; while both groups should be considered in arriving at a conclusion in regard to its curative effects.

The mortality of the Liverpool cases, which number about one hundred and twenty-five, was absolutely nothing, a fact which reflects great credit upon the surgeons of that city. Unfortunately, little is said of recurrence of the trouble. Of twelve cases in the Northern Hospital which had been observed for at least six months, ten were cured and two failed. The results of twenty-one operations in the hands of Mr. Banks, in which a sufficient time had elapsed to apply the test, and recorded in the *British Medical Journal*, for November 18, 1882, indicate fifteen complete cures, four partial successes, and two failures. Hence, 24.2 per cent. of these thirty-three cases failed.

In a monograph, entitled *Die Moderne Radikaloperation der Unterleibsbrüche*, Hamburg, 1883, DR. LEISRINK has collated 390 cases, which throw the desired light upon the questions of mortality and efficiency. Of 202 curative operations, that is to say, performed upon reducible herniæ, 187 recovered, and 15 died; of the former, 20$\frac{1}{9}$ per cent. recurred. Of 188 operations in connection with strangulated hernia, 155 recovered, and 33 died, but nothing is said of relapses.

The combined results of the Liverpool cases, and of those collated by Leisrink, show that of 515 operations for reducible and strangulated herniæ only 9.3 per cent. died, of which about 2 per cent. may be ascribed to the strangulation itself, since the mortality of the operation for reducible hernia, as shown by Leisrink, is 7.4 per cent.

The natural conclusions at which we would arrive from a consideration of the foregoing facts are, first, that, although the modern operation kills about one patient in every thirteen or fourteen, and fails in about one case in every five in which it is resorted to as a matter of expediency, it none the less is of great value in restoring many persons to comfort and the possibility of earning their living; and, secondly, that it should be practised in all operations for strangulated hernia in which the gut can be returned into the abdomen.

In a paper contributed to the *Nordiskt Medicinskt Arkiv*, vol. 25, part 4, Lindfors, of Lund, records two examples of the radical cure of congenital omphalocele, the operations having been performed by himself and Krukenberg. The sac, having been previously incised if adhesions are present, is cut away, and the refreshened edges of the opening are united by sutures. In both cases the recovery was complete in four weeks. Instances of a somewhat similar nature have been reported by Rosander, in *Schmidt's Jahrbücher* for 1878, and Banks, in the *British Medical Journal* for November 18, 1882. In both, the sac and a portion of the omentum were removed, but the ring was not sutured. In none of the four had sufficient time elapsed to form a conclusion as to a final cure.

A NATIONAL PHARMACOPŒIA.

On another page we give, from the *Journal of the American Medical Association*, the text of a bill to establish a national pharmacopœia, which has been recently introduced in the House of Representatives and referred to the Committee of Ways and Means. Our readers can thus consider its provisions for themselves, and form an intelligent opinion as to the method proposed for carrying out the object of the bill. That object, we believe, will meet with virtually unanimous approval on the part of both the medical and pharmaceutical professions, as it will simply place the United States on a level in this respect with other civilized nations. From the report of Dr. Flint, U.S.N., to the Smithsonian Institution, we learn that "of nineteen pharmacopœias in use in different countries of the world, fifteen were issued under government authority, and their directions have the force of law in their respective countries. The other four, viz., United States, Mexico, Switzerland, and Tessin, were prepared by commissions appointed by medical or pharmaceutical societies, and have no other authority in their support than that of the societies from which they emanate." Professional men in general, we suspect, will agree that we have followed the Mexican system long enough.

That the want of such a national and authoritative standard has not hitherto been pressingly felt is owing to the fact that for fifty years—from 1830 to 1880—the necessity was met by the voluntary action of representative members of the two professions, actuated only by professional and scientific zeal, and the result of their labors was freely given to their fellow-members at the lowest price compatible with accurate execution. Unfortunately, since 1880 the *United States Pharmacopœia* has become a matter of commercial speculation. While a vast amount of intelligent and well-directed labor was bestowed upon it by members of the Committee of Revision, taken as a whole it is by no means creditable to the science of the country, and complaints as to its inaccuracy and the inconvenience of its methods have been numerous. Not only was it thus inferior to former revisions, but it was padded out into an absurdly large and clumsy volume, and supplied to the profession at an extravagant price, wholly disproportionate to its former rate. That this departure from the time-honored course followed in former revisions should awaken widespread dissatisfaction was inevitable; and it was to be anticipated that that dissatisfaction would lead the Government to supply a want which had always existed, but which had never before become so imperative as it is now.

Congress, of course, has no power to establish by law a standard for the manufacture and dispensing of pharmaceutical preparations, and we see that the proposed Bill makes no attempt to do so. The government, however, has the power, and it is its duty, to furnish an authoritative standard for the use of its own officers in the military, naval, and marine-hospital services; and the Treasury Department, moreover, has long felt the need of some legal standard whereby to construe the tariff on drugs. It is primarily to meet these necessities that the proposed legislation is sought, and if, as is probable, the practitioners and pharmacists throughout the country adopt the same standard, we shall have what we have hitherto lacked, a pharmacopœia national and authoritative, in fact as well as in name. We observe that the Bill invites the coöperation of the Medical and Pharmaceutical Associations, which will doubtless be freely given, and the result of the combined labors of the ablest men in their respective branches, working under the auspices of the government, can hardly fail to be eminently credit-

able to the country at large and to give a fresh stimulus to pharmaceutical science.

As we have said above, we have no doubt that the plan for accomplishing so worthy an object will meet with a professional approval practically unanimous. It was to be expected, of course, that the commercial interests represented in the present *Pharmacopœia* as a business enterprise would object to a competition which threatens to be overwhelming, but this antagonism will be rated at its true value. The professions at large, who have been forced to purchase at a high price a work which is imperfect in many respects, will be gratified to obtain, at a minimum cost, a standard authority on which they can implicitly rely, if the work be executed as perfectly as there is every reason to expect.

While the decision rests with Congress, the question is one which ought to be settled by the weight of professional opinion. We therefore trust that all intelligent physicians and pharmaceutists will give this matter the reflection which its importance demands, and will communicate their views, whether favorable or adverse, to their members of Congress. We frankly believe that the measure must inevitably pass on its merits at this session, if it is not crowded out by the bustling legislation of a presidential year. We likewise believe it to be inevitable that if it fails at present, it will be again brought forward, and that its final success is only a question of time.

INTERNAL ŒSOPHAGOTOMY FOR CICATRICIAL STRICTURE.

In the current issue of The Medical News, Dr. Sands, in a highly practical, valuable, and exhaustive paper, calls attention to the merits of internal incision in the treatment of cicatricial stricture of the œsophagus. His case was that of a child eight years of age, who was at death's door from an obstruction, due to swallowing a solution of caustic potassa, situated eight inches and a half from the incisor teeth. After attempts to introduce an instrument for six days, a filiform whalebone bougie was finally passed, after which dilatation was practised almost daily for five months, or until it was possible to insert an elastic bougie, No. 17, French scale. During the succeeding three months and a half, the band was divided not less than seven times with an instrument devised by Dr. Sands, and five weeks later the patient was discharged, having increased her weight by one-half, and dilatation to 39 of the French scale having been accomplished. At the date of the last report, or three months after the last incision, there was no tendency to recontraction.

In the case thus briefly outlined, the subject was restored to comparative comfort and health, although too little time has elapsed to base a conclusion as to a permanent cure. The subsequent history of such cases, however, indicates that, almost without exception, recontraction ensues, particularly in children, who are difficult to manage. Hence, we regret that Dr. Sands did not base his estimate of the comparative value of the different operations for cicatricial obstruction of the gullet upon statistics derived from cases of children alone, as they constitute a class of subjects very distinct from adults in regard to the prognosis after interference.

Omitting the case of Boeckel, cured by electrolysis, we happen to have before us the details of nineteen operations for cicatricial stricture in children — several derived from private sources — which will throw some light upon their relative merits. Of four œsophagostomies, all died; of three internal œsophagotomies, two were living, respectively, at the end of five months and three months, the cases being those of Roe and Sands, while one, that of Czerny, died from complete division of the tube. The single case of combined œsophagotomy of Gussenbauer was alive at the end of one year. Of eleven gastrostomies, four died, the mortality percentage being only slightly greater than that of internal œsophagotomy. The four internal œsophagotomies, including the combined operation of Gussenbauer, indicate an average prolongation of life of one hundred and fifty-five days, three patients being alive at the expiration, respectively, of three, five, and twelve months. The eleven gastrostomies, on the other hand, show an average life of three hundred and sixty-nine days, Staton's being alive at the end of five months, Albert's at the expiration of five months and a half, and Herff's, of San Antonio, Texas, at the end of four years and five months. More than this, Trendelenburg's patient died in four years from abscess of the brain, the result of caries of the petrous bone following scarlet fever. The remaining cases survived two, seven, and eight months.

These results speak strongly in advocacy of the more simple operation of gastrostomy for cicatricial obstruction of the œsophagus in children, and their consideration leads us to regard it with more favor than does Dr. Sands in the paper referred to.

BACILLI IN THE MILK OF ANIMALS SUFFERING FROM SPLENIC FEVER.

Reich has recorded some observations which show that phthisis was transmitted by a phthisical nurse to a number of children, and Epstein believes that the disease may be transmitted to infants by the ingestion of the milk of tuberculous cows. There is, moreover, abundant evidence to prove that milk is capable of distributing enteric fever, diphtheria, smallpox, and scarlet fever, and it is probable that

it will be found to be one of the agents of communication of other diseases.

Splenic fever, anthrax, or charbon, as the affection is variously termed, is known to be very common among our domestic animals, and the blood contains enormous numbers of bacilli. Straus and Chamberland have demonstrated the fact that, through artificial inoculation, these organisms pass into the blood of the fœtus, the bile, and the urine; and in a recent communication to the Faculté des Sciences de Bordeaux, which may be found in the *Gazette Hebdomadaire*, for November 30, CHAMBRELENT and MOUSSONS have demonstrated in sucking guinea-pigs the passage of bacilli anthracis into the milk, in which fluid, however, they are far less abundant than in the blood. If future observations should show that the milk of cows suffering from splenic fever constitutes a favorable nidus for the growth and dissemination of these organisms, the application of the knowledge will be obvious.

CALCIC NEPHRITIS.

IN our issue of last week we called attention to the uric acid, or gouty, nephritis, and in this connection it behooves us not to lose sight of the fact that there is also a calcic nephritis, caused by deposits of lime in the uriniferous tubules. Unlike the uric acid deposits which are found in the straight tubes of the medulla, these are very often found in the cortex of the kidney, especially in the capsules of the glomeruli, where sometimes they form concretions of such size that they are visible to the naked eye. But they also occur in the convoluted tubes of the cortex, and even in the straight tubes of the medulla.

The chronic interstitial nephritis which attends these calcic deposits is, in many respects, similar to that associated with gouty nephritis. Indeed, it is mainly distinguished from this form by the tendency it exhibits to produce small cysts, which originate in constrictions of the uriniferous tubules. The tubules, including the straight tubes, form, first, varicose loops and tortuosities, which are gradually cut off from the tubule itself. Thus originate a series of cysts, which enlarge, and by their confluence form larger sacs.

Virchow has also described a series of cases in which these limey deposits in the tubules of the kidney appear to be metastatic, that is, large quantities of calcareous matter are dissolved out in certain diseased states of the bones and carried into the circulation, whence, among other situations, they are deposited in the kidney.

Still another mode in which lime salts occur in the kidney, is in the shape of an infiltration of the basement membrane of tubes bereft of epithelium. These, beginning on the apices of the papillæ, radiate thence in white lines towards the bases of the cones. On section, the tube is patulous, without epithelium, its walls being simply infiltrated with the lime salts. The cause of this condition would appear to be a catarrhal process resulting in a desquamation of the epithelium, with a subsequent calcareous infiltration, against which the epithelium had previously apparently protected them.

QUININE PILLS, AGAIN.

WE had felicitated ourselves that the exposure in THE NEWS, a year ago, of the prevalent shortage in the quinine pills of leading manufacturers, had led to greater accuracy in the compounding of these important little articles. That it did so, at least for a time, we have no doubt; but the permanence of the improvement is gravely questioned in a statement made by Messrs. McKesson & Robbins in the *Druggists' Circular* for the current month. That well-known firm asserts that it has analyzed samples of various brands of quinine pills, with the result of finding shortages running all the way from seven to thirty-five and a half per cent. of the alkaloid. Unfortunately, it does not mention the names of the makers of these short-weight pills; but it threatens to do so unless they speedily reform. We welcome all allies in the good cause, and shall watch with interest the result of this new investigation.

Messrs. McKesson & Robbins further promise next month to furnish a new and simple process for the assay of quinine pills with reasonable accuracy, enabling every competent pharmacist to determine for himself the value of what he dispenses. As all the processes heretofore relied upon are somewhat complicated and troublesome, we shall be very glad to see the new method, and to test its practicability.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

THIS year's meeting of the Medical Society of the State of New York retained the New Code as its point of pivotal interest. Although an unofficial, yet probably accurate, canvass of the five thousand physicians in the State had shown a clear majority to be opposed to the New Code, and a minority of but one-fifth in its favor, yet it was regarded as a foregone conclusion that this minority would be so interested in its maintenance as to insure their presence at the meeting in sufficient number to give them a majority. Hence, the result of the vote on Dr. Didama's resolution for the restoration of the National Code was not unexpected.

As the outcome of this action, the adherents of the National Code felt impelled to uphold what they consider the right. They, therefore, held a meeting on Wednesday morning and organized a new State Society.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Seventy-eighth Annual Meeting, held in Albany, February 5, 6, and 7, 1884.

(By Telegraph from our Special Reporter.)

TUESDAY, FEBRUARY 5TH, FIRST DAY.
MORNING SESSION.

THE Society met in the Geological and Agricultural Hall, and was called to order by THE PRESIDENT, ALEXANDER HUTCHINS, M.D., of Brooklyn, and the meeting was opened with prayer by the Rev. Dr. King, of the Emmanuel Baptist Church.

THE PRESIDENT, ALEXANDER HUTCHINS, M.D., of Brooklyn, then delivered the

INAUGURAL ADDRESS,

of which the following is an abstract:

Gentlemen: In the name of the Medical Society of the State of New York, venerable through its seventy-eight years of active history; with a constituency so large, so preëminent, and so productive; with a cultured enthusiasm that has neither waned nor faltered; with a series of acquisitions, each, in its turn, abreast of the advancing triumphs of medical learning, I am privileged to welcome you to this meeting.

I submit to the Society whether some change in its business detail cannot, profitably, be made in the interest of its scientific work. The Society meets so rarely that it would not be desirable to abridge, in any way, the open discussion of all matters pertaining to its routine and legislative functions; but the remaining hours of its session could be more satisfactorily filled if it should be so desired. There are various methods of accomplishing this, but I prefer to propose that the Society, by special resolution, instruct or permit my successor to appoint the Business Committee in advance of the meeting, that they, in connection with him, may arrange for the presentation of the scientific work at the next meeting on some more or less flexible plan, and the Society can thus, perhaps, better judge if it is wise to formulate this provision in a by-law. I suggest that an effort might be made to call out original work by announcing at each meeting a number of *queries*, to which answers are solicited at the next succeeding meeting. Another suggestion is to devote one session to what is known as the "Omnibus Meeting," where, in an informal and volunteer way, individual experiences are offered in large numbers and rapidly discussed. This is essentially free-lance, social, and instructive.

I place before you certain documents relating to the Bill (H. R. 48) providing for the erection of a building to contain the records of the library and museum of the Medical Department, U. S. Army, introduced December 10, 1883, and referred to the Committee on Public Buildings and Grounds, and I advise the formation of a committee to memorialize Congress on behalf of that measure.

I call your attention to the subject of hospital-trained nurses, and advise a convention of representatives of the several schools to effect uniformity of curriculum, adequacy of instruction, and the assured qualifications at graduation.

I beg to suggest that this Society can, with great propriety, further the interests of the *Index Medicus*, by an appropriation of money to secure the continuance of that important publication.

The subject of medical education has commanded the attention of this Society. Certainly no more important matter can occupy its deliberations, and yet this Society has no authority over the medical colleges. The preliminary education of medical students has been under discussion in this Society and elsewhere, and the matter of a better preliminary education has been advised and endorsed by this Society, but nothing has been accomplished. In the opinion of the speaker the whole discussion is fruitless, and must be so, under the existing management of medical education.

The authority to license granted to the incorporated societies and the degrees conferred by colleges have had the common sequence of right to practise—latterly, after compliance with certain formalities. The power of conferring a degree and the license to practise are, certainly, different things, and it is proposed to enunciate and legalize this difference. The object of obtaining the degree is to give the right to practise, and the preliminary acquisition of the degree is to be the acquisition of an empty honor till it has been endowed by the State, after compliance with certain conditions, which are, practically, a repetition of the conditions in accordance with which the degree was given. This after-criticism of the colleges, the extra machinery, and the increased expense are offered as safeguards to the community.

Granting the ideal wisdom of the scheme, there are many vested rights that must be consulted, many conflicting interests to be harmonized, and a gathering-in of advice from the large experience of medical men throughout the State, before this Society even would be competent to give voice to any resolution looking to the enforcement of so radical and far-reaching legislation. As in all other matters, so in this, this Society can act wisely only as it reflects in its actions the sentiments of the various bodies it represents; and it is competent for this Society to initiate action that shall discover the conclusion in this matter at which the medical practitioners in the State have arrived. These criticisms are made in full knowledge of the fact that the Erie County Medical Society has given large consideration to the production of a bill looking to a radical change in the licensing authorities. The Erie County Medical Society consulted with the Committee on Legislation of this Society and had its hearty approval of the measure; and, later, this committee assumed its responsibility. In a sense, therefore, this bill has the endorsement of this Society, and the Society will listen with curiosity and interest to the explanation its committee may give as to the expected workings of this measure; still, as it is so much easier to avoid hasty legislation than to secure its repeal, the Society is entitled to exhaustive information before giving its approval to this or any other measure.

Another bill, of similar intent, but varying in detail, is before the Legislature. They both, however, have

the common provision of a mixed board of examiners appointed by the State. I have no information whether the two chartered bodies of special practice have been consulted in the preparation of these bills, or whether it is proposed to legislate them into competency of representation in this licensing board, leaving them free to accept the representation or not, as they may elect. Personally I have no faith in any ultimate good to result from this kind of legislation, beyond additional police regulation of compliance with form. I see ground for opposition to it, in the way of preventing possible unlimited political combination and chicane. It is well to recollect the conceded fact that, in skilled and accomplished teachers, and in completeness of equipment in all the multiform appliances for medical instruction, this country furnishes opportunities surpassed by none. The deficiency is not here. That legislation will be consummate which shall formulate the wise experience of the best into a curriculum, the fulfilment of whose probation shall be an adequate assurance that the requisite time and opportunity have been given for the novitiate to have become the student, and the student to have acquired the scholarly habits competent for the mastery of his profession. It is at the end of the line that the real reformation is to begin. Within this Society rests the experience competent to prepare that curriculum. Holding, as I do, the supremacy of this Society as the natural guardian of medical interests in the State, I would legislate this Society into closer relations with the medical colleges, rather than subject the colleges to the unstable condition of political appointees.

Three separate proposals affecting the question of the Code were made at the last meeting, to be called up at the present session—one by Dr. Didama, of Syracuse, another by Dr. Roosa, of New York, and a third by Dr. Howe, of Buffalo. These proposals present three distinct phases of the question, and will be at the disposition of the Society.

The practice of medicine is so beset by parties and factions, that the dissension and sorrow that have occurred in our own ranks are greatly to be deplored. That men, who have commanded respect not only in their own communities, but for years in this body, should feel bitterly, over the action taken by it, is a matter of profound regret. It would appear that the question of the Codes has gone beyond the discussion of the principles involved in the main issue, and has advanced to the stage when this Society is simply to decide whether it proposes to adhere to its policy of the past two years, or reverse it. The sentiment of the profession in the State on the main issue is better known to-day than at any period since the original action, two years ago. The results of a canvass of the physicians in affiliation with this body have been published, and, if not authoritative, they are so detailed as to admit of immediate contradiction, if incorrect. By the exhibit it appears that of the five thousand physicians canvassed, a majority are opposed to the present policy of the Society, while a minority of about one-fifth openly favor that policy. As the action of this Society is binding on the County Societies, and the aggrieved members of the County Societies must find their redress through *this* Society, if at all, the issues seem very clearly defined, provided the accuracy of these figures can be supported. They who hold the autonomy of this Society, its independence of professional sentiment, and the moral right to legislate in opposition to the major professional sentiment, can properly sustain its present policy; while they who hold that this Society is essentially a representative body, under moral obligation to legislate in accord with the major professional sentiment, are logically bound to oppose the present policy of this Society. I hold that opinion on these issues is one strictly of justice, and entirely apart from prejudice in favor of either of the Codes. On an issue which profoundly affects professional tradition and personal conviction of right and duty, this Society has adopted and confirmed a policy. On the wisdom of that policy the Society itself is very evenly balanced. The action of the Society forced each of its constituents into an attitude, hostile to his past relations with his professional brethren and the community, on a question where principle was involved. No effort was taken, at the time, to ascertain the major professional sentiment, and the Society has taken no measures since to discover opinion on its policy. The majority of the constituents of this Society are in sympathy with its policy, or they are opposed to it. If the majority of the profession in the State are in accord with the action of the Society, no injustice has been done. If the majority are opposed to its action, the Society should decide whether justice and fair-dealing require it to reverse its action to conform to the convictions of that majority.

Conscious that in this prolonged discussion, I have laid myself open to the criticism of undue (and therefore needless) intrusion of personal opinion, I still have the absorbing desire and the strong hope that your deliberations may be so temperate and well informed, as to lead to the settlement of policy so wise, that opposing sentiment may suffer the least possible shock, and the forces that underlie all professional activity be girded with renewed vigor in their efforts to support the dignity and usefulness of the profession.

The President then appointed the following

COMMITTEES.

Business Committee.—Drs. J. W. Moore, of Albany Co.; A. M. Phelps, of Franklin Co.; and J. H. Hunt, of Kings Co.

Committee on Credentials.—Drs. I. N. Goff, of Madison Co.; James Chapman, of Orleans Co.; P. R. H. Sawyer, of Westchester Co.

After a recess of ten minutes,

COMMUNICATIONS FROM COUNTY MEDICAL SOCIETIES

were called for.

The Medical Society of the County of Albany, presented the following: At a regular meeting of the Medical Society of the County of Albany, held on February 1, 1884, the following recommendation of the Committee on Legislation was adopted: "Although containing defects the Bill presented by the Committee on Legislation of the Medical Society of the State of New York seems, if properly enforced, to be able to accomplish the purpose designed; we therefore recommend that the Medical Society of the County of Albany lend its influence to the endeavor which is being made to make the provisions of this Bill the law of the State."

On motion, the subject of this communication was

made the special order of business for Wednesday morning.

The Medical Society of the County of New York presented certain suggestions with reference to the by-laws, which were referred to the Committee on Business.

THE CODE OF ETHICS.

The Ontario County Medical Society presented the following resolution, which it had passed:

Whereas, Our State Society by a majority vote confirmed the amendment to the Code of Medical Ethics, adopted the year before, called the New Code; and,

Whereas, The New Code, so adopted, is antagonistic to the National Code of Ethics; and,

Whereas, The American Medical Association refuses to affiliate with, or to admit delegates or members from, any society or association which does not adopt or endorse the National Code of Ethics, therefore

Resolved, That this Society places upon its records the reiteration of its adherence to the Code of National Ethics, as adopted by the American Medical Association.

Resolved, That it is the earnest request of a large majority of the members of this Society, that our delegates to the State Society use every endeavor and all honorable means to so modify or alter the New Code of Ethics that it may be in harmony with the National Code of Ethics.

Resolved, That our Society be requested to transmit a copy of these resolutions, together with the number of votes, both yea and nay, to the Secretary of the State Medical Society, which were carried by a vote of seventeen yeas to four nays.

The Medical Society of the County of Washington presented the following resolutions, which it had adopted:

Resolved, That it is the sentiment of this Society that it is the bounden duty of the Medical Society of the State of New York to so modify its present Code of Ethics as to be entitled (as formerly) to representation in the American Medical Association, and thus, by its delegates and representatives in that honorable body, have the right of protest and of effort to secure immediate reform in a legitimate manner.

Resolved, That it is the sentiment and earnest request of this Society that the American Medical Association, without unnecessary delay, do modify, change, and adapt its Code or System of Medical Ethics, so as to meet the wants and demands of the medical profession of the present day and generation.

Resolved, That our Society be requested to forward a copy of the foregoing resolutions to the Secretary of the State Society and of the American Medical Association.

DR. A. JACOBI, of New York, offered a resolution calling the attention of Congress to the importance of the speedy passage of the bill providing for the erection of a

FIRE-PROOF BUILDING FOR THE MEDICAL DEPARTMENT OF THE ARMY.

The resolution was adopted, and it was ordered that it should be sent to the proper committee, attested by the seal of the Society and the signatures of the President and Secretary.

DR. J. P. CREVELING, of Auburn, reported a case of

DOUBLE HARELIP.

A young girl, æt. 11, was born with double harelip. The entire intermaxillary bone was adherent to the septum of the nose, and protruded some distance in advance of that organ, and rendered nursing very difficult. In order to diminish this difficulty, the projection, which was covered with mucous membrane, was removed, except a small part at the distal extremity. The case was then lost sight of until November, 1883, when she was admitted to the City Hospital for operation. The fissure began at the ala nasi on either side, and extended backward and downward to the angle of the mouth. Both intermaxillaries were gone. The operation consisted in free dissection of the cheeks, from the bony surfaces throughout their whole extent. The alæ of the nose were also divided. The incision on the right side began at the ala of the nose, and extended to the angle of the mouth, through two-thirds or more of the lip; on the left side a corresponding incision was made, except that the whole thickness of the lip was cut through. These flaps were transfixed at their central part, and a large pin was passed near the bottom of the first incision. The right and left flaps were then brought into apposition and firmly held by a pin. Another pin was introduced at the mucous margin of the lip, and two small pins at intermediate points, and the whole was secured by proper bandage. The advantages claimed for this operation are that the extent of adherent surface is one-third greater than that obtained by the more central incision of the lip, and that it also prevents the secretions of the mouth from finding their way between the edges of the wound. In the case reported union was perfect.

DR. W. C. WEY, of Elmira, moved that a committee of three be appointed, to which the President's Address be referred.

DR. WEY then reported *Two Unusual Cases in Obstetrical Practice.*

DR. DAVID LITTLE, of Rochester, then read a paper on

SUMMER COMPLAINTS IN CHILDREN.

After referring to the subject of diet, he related his experience in the Rochester Orphan Asylum, where, up to 1882, there had always been a number of cases of this disease each summer. At this time he instructed the nurse to feed the children every three hours, and to give them as much water as they would take. The summer passed without a single case of diarrhœa. In the summer of 1883, the same plan was adopted, with the same result. Only two cases of diarrhœa occurred, and they were in children of tuberculous parents, who had exhibited scrofulous manifestations.

DR. WOOLLEY, of New York, thought that, in considering the efficacy of any special plan of treatment, it was necessary to remember the effect of epidemic influence, which, since 1882, had not been very marked.

DR. W. S. ELY, of Rochester, thought that more was to be gained from the regulation of diet than from medicines. A few weeks ago he had seen a case in which this point was clearly illustrated. The child was five weeks old, and had from eight to ten stools per diem; on inquiry he learned that the child took about four

pounds of food per day, and that it had taken large quantities of medicine. On this diet it was losing about one-quarter of a pound per week. Recovery followed suspension of all remedies, regulation of diet, and the free use of water and warm baths.

THE COMMITTEE ON PRIZE ESSAYS

reported that there had been two essays submitted: (1) on *Tuberculosis of the Breast*, by Dr. Ghislani Durant, of New York, for which the Cash Prize was awarded; (2) on *Consumption*, which was thought worthy of publication.

DR. A. G. GERSTER, of New York, then read a paper on

CANALIZATION AS APPLIED TO AMPUTATION OF THE FEMALE BREAST TO INSURE PRIMARY UNION UNDER ONE DRESSING.

Canalization was first introduced by Neuber, of Kiel. It is a process by which good drainage is afforded to a wound without the use of drainage-tubes. There are two kinds, shallow and deep canalization.

The first is employed for draining extensive subcutaneous cavities, situated beneath large skin flaps. It is accomplished by the aid of a punch, devised by Neuber, similar to the common leather punch, the hole which it makes being elliptical. Any subcutaneous fat which protrudes through the opening made by the punch is to be removed with scissors. As many holes as will suffice to carry away the secretion are made through the dependent portion of the wound. If the wound is extensive, it is well to scatter a number of holes over the entire flap covering the wound. Deep canalization is used to afford drainage to secretive accumulations in the recesses of deep wounds. Here intermuscular planes are opened up, and the dangers of retention and suppuration are more grave than in the case of shallow wounds. These cases will often require the use of a drainage-tube.

The invention of absorbable drainage-tubes by Neuber, is an important step forward. These tubes are made of ox bone, and when decalcined and disinfected, behave in a wound exactly like catgut. Even this is a necessary evil, and Neuber advises a procedure which will do away with the necessity for drainage-tubes. He advises that the skin on both sides of a deep wound be detached so as to make it movable, then turn it into the bottom of the cavity and fasten with catgut sutures. In this way the greatest portion of the cavity becomes lined with skin, and it can heal by adhesion, and the funnel of cutis serving at the same time as an unobstructible channel for draining the bottom of the cavity. This is *deep canalization*.

The author then referred to the result obtained by Esmarch in the use of absorbable drainage-tubes in amputation of the female breast. Over forty cases were treated in this way, healing throughout by first intention.

In this operation, it is important to remove the axillary glands, which causes a large cavity, where, if suppuration be not avoided, a large amount of cicatricial tissue will be produced, which, from its close relation to the vein and brachial plexus, is apt to cause œdema and pains radiating down the arm. In order to avoid this disadvantage, and to do away with the necessity for use of absorbable drainage-tubes, which are difficult to procure, it was thought proper to try Neuber's idea of deep canalization, as adapted to the axillary cavity.

The following case, illustrating this method of treatment, was reported:

Miss C. H., somewhat anæmic. One year before, she had noticed an irregular nodosity in the left breast. Amputation of the breast and evacuation of the contents of the axillary cavity were performed November 30, 1883. Solution of corrosive sublimate (1 to 1000) was used for irrigation, and four holes were punched into the skin of both sides of the wound. The anterior portion of the wound was united with two continuous catgut sutures. The edges of the axillary portion of the wound were dissected up for about an inch on both sides; then the anterior skin-flap was transfixed with a stout catgut suture, and being turned well into the apex of the armpit, was sewed to the posterior aspect of the pectoralis minor muscle. The posterior flap was sutured to the latissimus dorsi. In this way the axillary cavity is transformed into a cone, lined with skin, at the apex of which, a small portion of the deepest part of the axilla remains uncovered. After this, a strip of gauze, dusted with iodoform, was laid on the line of sutures, and a large pad of sublimated gauze was snugly bandaged on to the shoulder and thorax.

On the eighth day patient left the bed. Two weeks after operation the first dressing was removed, and the entire wound was found healed by first intention in the literal sense of the term.

On microscopical examination. the tumor was found to be an adeno-sarcoma, containing a large number of miliary cysts.

Two more cases were reported, in which the same results were obtained by this plan of treatment.

The paper closed by saying:

The limited experience gathered in the foregoing cases seems to justify the assumption that, when Neuber's bone drainage-tubes cannot be procured, primary union of the entire wound in a normal amputation of the female breast can, by the employment of deep canalization, nevertheless be attempted and accomplished under one dressing.

DR. OREN D. POMEROY, of New York, then read a paper on

MALFORMATIONS OF THE AURICLE,

relating a case on which he had operated. The latter was as follows: E. F. W., Jr., æt. 16, had a malformation of the left auricle which was congenital. The meatus with the auricle was placed nearly three-fourths of an inch lower than its fellow. The upper portion of the auricle was attached to the cheek, in front of the meatus, somewhat covering the latter, and interfering with perfect audition.

The peculiar, doubled-up appearance of the ear gave it the characteristics of what is known as cat's ear, and was very unsightly. No hereditary cause for the trouble could be found. Two operations had previously been performed by a surgeon of Boston, Mass., which had rendered the deformity worse rather than better. One or two very small portions of rudimentary auricle had been removed, however, at that time, which improved the patient's appearance. The side of the face, the fauces, the chest, and, indeed, most of the left side of

the body, showed signs of arrested development. A mitral regurgitant murmur was present, and the patient was not very strongly developed. Ether was administered in the operation, although a full effect was avoided on account of the weakly condition of the patient, including the heart trouble. The auricle, at its faulty attachment, was divided on a level with the surface of the face, far enough back to allow it to be drawn up into a normal position. An incision above, and somewhat in front, of the mastoid region, was made through the skin; this being somewhat undermined, permitted a sufficiently uncovered surface to appear, to which the auricle was attached by sutures, of which twenty were used. Most of these were inserted into skin, but about three or four were needed to transfix cartilage. The wound made by dividing the auricle was closed by undermining the skin and using sutures. The healing was prompt and satisfactory. The sutures inserted into the cartilage caused some irritation, while those in the skin caused none. Dr. Pomeroy quoted cases where sutures were passed into the cartilage of the auricle, without causing undue irritation, and a case where a severe wound of the cartilage of the meatus and auricle healed promptly. He quoted most of the cases of malformed auricle found in literature, with a detailed description of the mode in which this arrest of development was brought about.

Dr. Mattison, of Brooklyn, said that, in a child ten years of age coming under his observation, and presenting a deformity similar to the one described, the auricle was separated from its attachments, its posterior surface and the skin covering the mastoid process were freshened, and perfect union ensued.

Dr. Jacobi, of New York, asked what was the experience of specialists in regard to the occurrence of this anomaly; whether it was usually accompanied by anomalies in other parts of the body?

Dr. Pomeroy stated that he had found, in at least half the cases, that the arrest of development involved no other organ but the ear, and that the arrest of development in other parts seems to bear no relation to the arrest of development of the ear.

Dr. George B. Fowler, of New York, then read a paper entitled

POISONING BY POTASSIUM CHLORATE.

A brief history of the drug was given, and reference made to its early popularity, which was based upon its oxygenating powers; this property being due to the fact that potassium chlorate ($KClO_3$), under favorable circumstances, readily gives up all its oxygen.

About the end of the eighteenth century this salt enjoyed a very limited popularity, but, during its previous fashionable period, Dr. Ferria, of England, had recorded its success in the sore gums of scurvy, and today its use is practically limited to diseases of the mucous membranes.

The accounts given of the effects of both large and small doses are conflicting, and the general opinion seems to prevail that chlorate of potassium is one of the most harmless of substances. The object of this paper is to prove and emphasize the contrary, and to show the real cause of death as proved by experiments on animals.

From time to time cases are reported where, on account of the unscientific manner in which the medicine is prescribed, death has resulted from its careless employment. Dr. Jacobi, in 1860, warned us against its lavish use, and recounted the feelings he himself experienced after taking ʒiv and ʒvi doses, they being "a sensation of heaviness and dragging in the lumbar region, and increase of the renal secretion."

In the 1868 edition of Stillé's *Materia Medica*, the author says, "There are only two examples of injury produced by chlorate of potash. The one occurred in a case of phthisis, for which a physician prescribed three hundred grains of the salt, to be taken daily, in solution. This unfortunate victim of professional ignorance took this dose on four consecutive days, when the pains in his bowels became very severe, incessant vomiting came on, and finally death ensued. The stomach was inflamed on its external surface, while its mucous coat was entirely disorganized and softened."

Dr. Fowler then referred to the well-known case of Dr. Fountain, of Davenport, Iowa, who, with experimental intent, took an ounce of potassium chlorate in a goblet of warm water; vomiting and diarrhœa ensued during the day. On the following day there were very alarming symptoms of collapse, and intense pain. Two ounces of black urine were voided, after which there was no renal secretion at all. He finally died one week after taking the dose, his sufferings having continued without intermission.

Larger doses have been taken without fatal results, and the variation in the quantity which has caused either death or alarming symptoms is very great, and rather peculiar. The possibility of an injurious effect appears to depend upon idiosyncrasy, condition of the stomach as regards contents, and whether the salt is in perfect solution. If it is not in solution, gastric symptoms arise.

About thirty cases are now on record where the cause of death has been attributed to an overdose of potassium chlorate, and the author holds, with Dr. Jacobi, that in many instances where the fatal termination of a case has been assigned to nephritis as a complication of the primary disease (diphtheria), that the rea cause of death was chlorate of potash.

In December, 1882, Dr. Fowler received a specimen of urine from a physician, accompanied by the information that it had been voided by a girl of fourteen, whose mother, having misconstrued the directions, had allowed the child to take ʒj and ʒij (six hundred grains) during one day. The patient became unconscious and cyanotic in the evening of the same day, and died two days afterwards, having remained blue and there being almost total suppression of urine. The specimen of urine was very interesting. Its specific gravity was 1055; it was of a very dark, bloody color, and was opaque. The microscope showed blood-corpuscles, crenated and dark brown. They were gathered in little masses throughout the field, and appeared agglutinated. It was evident that we had here urine mixed with a decomposition product of hæmoglobin, and placed before the spectroscope the characteristic spectrum of methæmoglobin was seen. Methæmoglobin is a substance found in old extravasations, hydrocele, and ovarian fluids, and can be prepared by the addition of dilute acids to blood coloring-matter. Spectroscopically, it is distinguished by an absorption band in the orange at C, the two characteristic bands of oxyhæmoglobin also persisting. Here

was a point. The blood color, the oxygen-carrier, had been destroyed. Was it effected by the potassium chlorate, or by mixture with the acid urine? Proceeding to experiment, it was found that warm, normally acid urine did not produce this decomposition; nor did even an excess of potassium chlorate in the cold; but, on warming the solution, the whole turned black, and under the microscope and before the spectroscope I found the same conditions as in the urine from the girl.

Methæmoglobin is incapable of supporting life, it cannot take up and deliver oxygen, hence the cyanosis observed in all these cases, and hence death ensues from asphyxia.

A saturated warm solution (about two ounces) was next injected into the stomach of a rabbit. After two hours the animal died in convulsions, and on opening the body, to the writer's surprise, he found the stomach perforated and generally softened. Blood normal.

In another experiment, two ounces of a cold saturated solution were injected into the stomach of a rabbit. After one hour death, with convulsions, ensued. The blood coloring-matter was not decomposed, but the corpuscles were markedly shrivelled and distorted, and the mucous membrane of the stomach and intestines was softened and inflamed. The kidneys were congested, and contained hemorrhagic spots. Seemingly, on account of the rapidity of its action on the stomach and kidneys, the blood color had not yet been seriously affected. Dr. Fowler concludes that potassium chlorate may kill, either by its local corrosive action on the alimentary canal, by its destructive effect upon the coloring matter of the blood, or by its inflammatory effect upon the kidneys.

DR. CASTLE, of New York, said: There is one phase of this subject to which I shall refer; that is, the local poisonous effect of chlorate of potassium. It has been stated in a foreign journal that the chlorate of potassium was introduced into medical use through a mistake in nomenclature, and that chloride of potassium is the drug to be used. I see no reason why the chloride of potassium should be any more efficacious than the chloride of sodium. A solution of salt in hot water, used in large quantities, is of service in local inflammation of the mucous membrane of the throat. In my hands, the use of chlorate of potassium usually makes a sore throat worse.

DR. LEWIS thought the reason that poisonous effects from the use of chlorate of potassium were so frequently reported was because the drug was handled so carelessly, and that if other remedies were used with the same want of care, they would be far more deadly than they now are.

AFTERNOON SESSION.

The first paper was read by DR. EDWARD H. PARKER, of Poughkeepsie, and was on *The Establishment of Hospitals in Small Cities*. He described the history of the St. Barnabas Hospital at Poughkeepsie through its thirteen years of growth.

DR. E. VAN DE WARKER, of Syracuse, then read a paper on

A NEW METHOD OF PARTIAL EXTIRPATION OF THE UTERUS.

He opened with the argument that in the operation for total extirpation of the uterus through the vagina the knife had reached its limits of usefulness, and if it could afford no better ultimate results than total mammary extirpation by the knife for carcinoma, its large direct fatality would stand in the way of the general usefulness of the operation. Uterine carcinoma called for more extensive and thorough removal than any operation yet practised, except total extirpation. We were therefore obliged to resort to some other agent. Dr. Sims had taught us how to apply a chemical caustic on dossils of absorbent cotton, wrung dry of all superfluous fluid, thus making the use of these agents as manageable for the uterus as a caustic paste was for the cancerous breast. Having the means, then, why not slough out the cancerous uterus as completely as though it were the breast? This, the author believes, he has accomplished.

The operation consists, first, of removal of the uterine cervix to the vaginal junction by the knife or scissors, and then excising the substance of the cervix as high as the internal os, in many cases relying on the curette, packing the cavity so made with cotton saturated with a twenty-five per cent. solution of subsulphate of iron, to guard against hemorrhage and harden and prepare the part for the chemical caustic. The astringent dressing is removed on the second day, and the excavation packed with dossils of cotton wrung out of a one hundred per cent. solution of chloride of zinc. A slough, varying from three-eighths to one-half inch in thickness, is the result, which is not removed by any force, but allowed to be cast off spontaneously. During this stage, hemorrhage is liable to occur, which is easily checked. The caustic has a sort of selective power, the debased carcinomatous tissue not being able to resist its action, while normal tissue, by throwing out a line of hyperplastic tissue, resists the destructive action. The line of demarcation is as fine as though cut by a knife.

In the cases cited, judging by the amount of tissue removed at the preliminary operation, and the quantity and shape of the slough cast off, there was no doubt that the entire uterus had been shelled out of its peritoneal envelope. Nothing could exceed the amount of uterus removed, except the operation of total extirpation. By means of microscopic sections, the destructive process of the chloride solution was demonstrated. It destroyed tissue by solidifying the fibres and coagulating the fluids, by combining with the water present in all tissue. Parts of low vitality are thus devitalized, but not disintegrated. Sections of sloughs, stained by logwood and mounted in Canada balsam, show the ultimate structure perfect in all its histological relations, as though it was prepared by solutions of chromic acid and spirit, for histological work. Cases were cited demonstrating the method.

DR. E. CURTIS, of New York, presented the

REPORT OF THE COMMITTEE ON EXPERIMENTAL MEDICINE,

stating that no bill had yet been introduced into the Legislature, and offering a resolution recognizing the importance of experiments on animals. Adopted.

DR. L. E. FELTON, of Potsdam, read a paper on the

VALUE OF ELECTRICITY IN DIAGNOSIS.

From an experience of ten years he was convinced of the value of electricity in the diagnosis of disease where

motor paralysis was a symptom. In these examinations it is necessary to be well acquainted with the normal response of the muscles. Different muscles react differently to the current, in regard to the strength of the current and the character of the contraction. The positive pole should be placed at some point where it cannot directly influence the muscle or the nerve. The negative pole is placed over the muscle or where the nerve enters the muscle. At this point the strength of current required to produce contraction is much less than at any other point. To find this point the electrode is moved down the muscle until it reaches a point where contraction is produced more easily than at other points. The negative electrode should be small, while the positive electrode should be large. The coverings of the electrodes should be thin. Sponges are not to be recommended. The pressure should always be the same. The thickness of the skin makes considerable difference as to the effect upon the muscles, a thick skin offering a much greater resistance than a thin skin. Cold extremities present a greater resistance than warm extremities: but when the circulation is restored they respond normally. Stimulating applications to the skin diminish the resistance. Anything that produces hyperæmia will give the same result. An eruption or a pimple will have the same effect. Unless the physician is cognizant of these variations, errors will be liable to occur. He then described a delicate galvanometer, which he had devised to determine the strength of the current employed. From his experience, he had come to the conclusion that functional diseases do not usually diminish the reaction of the muscle. Where this occurs, organic disease should be suspected. On the other hand, in some cases of organic disease, the reaction is often normal, and sometimes exaggerated. Where faradic reaction is greatly diminished, the galvanic reaction may be marked.

THE PRESIDENT announced the following as

THE COMMITTEE ON NOMINATIONS.

From the Society at Large.—E. H. Parker, M.D., of Poughkeepsie.

First Senatorial District.—Laurence Johnson, M.D.
Second Senatorial District.—George C. Smith, M.D.
Third Senatorial District.—F. C. Curtis, M.D.
Fourth Senatorial District.—L. E. Felton, M.D.
Fifth Senatorial District.—H. G. Du Bois, M.D.
Sixth Senatorial District.—W. W. Crandall, M.D.
Seventh Senatorial District.—Darwin Calvin, M.D.
Eighth Senatorial District.—John O. Roe, M.D.

THE MEDICAL FACULTY OF THE UNIVERSITY OF NEW YORK.

DR. W. C. WEY, of Elmira, offered the following:

Resolved, That a bill to establish the Medical Faculty of the University of New York be, and hereby is referred to the Committee on Legislation, with instructions to report to the Society to-morrow morning, when the order for the report of said Committee is reached.

DR. A. JACOBI, of New York, then read a paper entitled

CONGENITAL LIPOMA.

These tumors, unlike lipoma occurring in the adult, are usually devoid of a capsule; they are therefore more diffused. Some are uncomplicated with, others are complicated with, vascular tumors; others with dermoid tumors, fibroma, formations of bone or cartilage, and in one case presented, the lipoma was complicated with spina bifida. The locality varies, many are found on the extremities. The hands, and still more the feet, furnish the largest number. Several cases of the affection were then reported.

THE REGULATION OF THE PRACTICE OF MEDICINE.

DR. POWERS, of Ontario, Canada, was introduced and made some remarks in regard to an Act regulating the practice of medicine, recently passed in Ontario. The Act requires an examination previous to matriculation; four years of study at a medical college, and the examination by a board independent of all teaching bodies. No degree from any part of the world will license a person to practise in Ontario.

DR. T. R. POOLEY, of New York, reported

TWO CASES OF ORBITAL CELLULITIS.

The first one was in a child of ten years, in whom the inflammation appeared without any apparent cause. Under proper treatment, the child recovered in ten days. The second case was in a young man, the subject of syphilis, who was at the time suffering from some secondary symptoms, and had stricture of the urethra. This case was so severe that the propriety of making incisions into the orbit was considered; but the use of warm applications proved so efficacious that this did not become necessary.

The inflammation appears with a chill, and sometimes vomiting, and there may be delirium and convulsions. The onset is marked by protrusion of the eyeballs, which usually occurs suddenly. This may be moderate or excessive. It is usually directly forwards. Diplopia may occur at any stage from interference with the muscles. Swelling of the eyelids is one of the earliest symptoms, the upper lid being usually most swollen. If the orbital inflammation result from disease of the antrum or dental caries, the lower lid may be the one involved. Chemosis and swelling of the conjunctiva is an early symptom. Mydriasis is very constantly present, although myosis sometimes occurs. There is sometimes sloughing of the cornea. The most important effect, however, is that produced on vision. It may cause amblyopia or amaurosis. It has been said that this is due to atrophy of the optic nerve, which has been preceded by atrophy.

Dr. Pooley then related a case which had come under the observation of Dr. Knapp, and presented illustrations of the ophthalmoscopic appearances of the fundus. It was suggested that the loss of vision might be due to thrombosis of the veins or central or retinal artery.

The treatment of orbital cellulitis should consist in the use of warm applications. As soon as the swelling and exophthalmos subside, the cure will be assisted by the application of a pressure bandage. When suppuration appears, the pus should be evacuated at the most dependent point, provided softening is not detected at some other point. The opening is perhaps best made through the lid, and should be made in the line of the fibres of the orbicularis muscle. It may be made through the conjunctiva.

DR. L. JOHNSON, of New York, presented

A PLEA FOR THE PHARMACOPŒIA,

in which he denounced the use of preparations made according to formulæ peculiar to certain manufacturers, and recommended that instead of prescribing such preparations, the profession should adhere to the preparations provided by the pharmacopœia, except in those instances in which these proved inadequate.

DR. JACOBI agreed with the author of the paper and thought that the article would have been more complete if he had also referred to the advertisements of these preparations which fill the medical journals. It might be said that if these advertisements were excluded the journals could not exist. In many cases this would result in the abolition of two nuisances.

DR. MITTENDORF, of New York, thought the evil a growing one. The Board of Pharmacy of the State of New York are preparing a list of formulæ so that the physician will be able to prescribe remedies in an elegant and pleasant form without having recourse to these objectionable preparations.

DR. CASTLE said that he had always discouraged the adoption of any set of formulæ not officinal. The preparation of these formulæ is more in the interest of the pharmacist than in that of the physician. Its object is to do away with the necessity of keeping the same preparation, put up by half a dozen different firms and have one preparation only.

THE COMMITTEE ON THE PRESIDENT'S ADDRESS,

then reported, and presented the following resolutions embodying some of the suggestions made by the President.

Resolved, That hereafter the President shall appoint the Business Committee in advance of the annual meeting, and at as early a date as possible for the purpose of securing scientific papers for the next annual meeting; that the President be made a member of this Committee ex-officio; and that the Business Committee suggest questions to be discussed, and that one hour be set aside for an omnibus meeting in which individual experiences may be related, and queries propounded.

Resolved, That in the case of a vacancy occurring in any committee, the President be authorized to fill such vacancy.

The resolutions were accepted and referred to the Committee on By-laws.

COMMITTEE ON NECROLOGY.

DR. J. G. FISHER, of Sing Sing, presented a resolution as follows:

Resolved, That the Committee on Nominations of this Society annually nominate a Committee on Necrology, consisting of three members, who shall prepare suitable biographical notices of such members as become deceased during the year, and these notices shall be published in the *Transactions* without further reference. Referred to the Committee on By-laws.

DR. ALBERT VANDERVEER, in his paper on

OPERATION FOR CLOSURE OF THE HARD AND SOFT PALATE, WITH RESULTS,

said: It is my intention to follow this brief paper with a series of questions addressed to such surgeons as are interested in congenital deformities of the mouth; with a view of ascertaining, if possible, what percentage of cases are really benefited by the various operations, as well as the success attending mechanical contrivances. The subject of cleft of the hard and soft palate, is one that is not so settled in the minds of surgeons as to exclude further elucidation; and while it is hardly safe for one to advance much that is new, I am convinced that more careful examinations and reports of our cases one or two years after the operation are needed.

It will ever remain a source of regret to the profession that such successful operators as Warren and Fergusson—the latter having operated in over three hundred cases—did not leave a more correct record as to the results. In a clinical lecture, published in the *American Clinical Lectures*, I have presented the different steps and manner in which I prefer to operate; the method being strictly that of Sir William Fergusson's, whom I have seen operate a number of times. I consider the operation for the closing of a complete cleft a different one, and there is more or less danger attending it from hemorrhage and the great and rapid secretion of mucus, which is liable to fill the bronchi, and suffocation ensue. Still, I have never been obliged to discontinue an operation by reason of the former, and have been only once deterred by the latter. In the second attempt I put the patient upon belladonna, with excellent effect.

In alluding to anæsthetics, he said: This is one of the few operations in which, when done in childhood, I regard chloroform as safe. I never use it in any other operation, and not in this after ten years of age. Regarding the age for successful operations, I believe that, if we could obtain honest statistics, we should find that the best time for operating is immediately after the first dentition—say, when the child is about two years old; and I am also of the opinion that if no attempt is made to have the child talk, there would be less danger of acquiring that nasal twang which is so difficult for an older person to overcome.

In double harelip, the treatment of the island, or intermaxillary bone, has been dwelt upon by various writers. He said: I am convinced that, of the different complications, it is in this one that experience is of the greatest value, and that every case presents one or more peculiar features; and that the same condition is not to be seen again in a number of cases; to save this island when possible is, I think, good surgery.

As to the manner of closing the single harelip, there need be little difference in opinion. The law is flexible that to obtain good results the vermilion border must be always on a line (projecting a little, if possible); if not, apparent notching occurs.

In conclusion, he stated that we ought to be careful not to promise too much; and yet, encouragement should be given when there is hope. He reported several cases in which the results were exceedingly gratifying, the restoration of speech being perfect; others, in which marked improvement occurred, with very few cases of actual failure.

DR. G. R. FOWLER, of Brooklyn, thought it a serious question when a patient of this kind presents himself, whether or not anything should be done. His experience is limited to three cases of operation on the hard and soft palate. He had not perceived the slightest advantage from the procedure. In one case he after-

wards perforated the palate for the introduction of an obturator. This was an adult. It was worn with benefit. As is well known, it is necessary to fasten the apparatus to the teeth, and from this resection of the gums frequently occurs. I wish to confirm what Dr. Vanderveer says, that unless the patient can be operated on early in life, but little benefit can be derived from the operation.

DR. HUTCHINSON, of Utica, reported a case of double harelip, and described a procedure which he had adopted for keeping the edges of the wound together, by means of a silver wire secured by means of a large shot on the inside of the mouth, thus avoiding the risk of producing a scar from the cutting of a stitch fastened externally.

DR. GERSTER, of New York, drew attention to one point not mentioned in the paper. In regard to deciding whether an operation was justifiable, he did not think that the improvement of speech was the only point to be considered. The wearing of an obturator requires a great deal of attention in regard to cleanliness. One source of annoyance in this condition is the passage of food through the opening into the nose, and its escape through the nostril. The operation, of course, removes this difficulty. In his experience of eleven cases, three were congenital. One of these was successful. This was a case of double, complete fistula. This patient was benefited to a certain extent, as regards speech. The other cases were not benefited to any great degree.

DR. POWELL said that in 1879 he operated on a young girl. Six months later he instituted a course of voice-training, and the voice has since improved very greatly.

DR. CREVELING, of Auburn, thought that if the cheeks were dissected very freely there would be no difficulty in bringing the edges together.

DR. WARD said that he had now operated or been an assistant in fifteen or sixteen operations involving the hard palate. In adults the voice was not much improved. If only the difficulty in regard to the escape of food and liquids through the nose were overcome, the operation would be a justifiable one.

DR. VANDERVEER said that in regard to the traumatic and acquired form of the disease, the paper had no bearing on this point. In syphilitic cases, although the patients have been selected with great care, and were in good condition, the majority turned out unsuccessfully.

DR. GERSTER asked if Dr. Vanderveer had made use of periosteal flaps in the operations on syphilitic cases? Dr. Vanderveer replied that he had.

DR. WEBSTER, of New York, then read a paper on

SYMPATHETIC SEROUS IRITIS.

DR. MITTENDORF, of New York, protested against some of the teachings presented by Dr. Webster. He would never consent to wait another day if the eye were blind. Dr. Webster reports his case as a curiosity, and it is a curiosity for sympathetic iritis to recover. A delay of twenty-four hours will often lead to the loss of an eye. The slight inconvenience of a little purulent discharge from the use of a false eye cannot be compared to the risk of losing both eyes.

DR. DANIEL LEWIS, of Albany, then read a paper on

HORSE-HAIR DRAINAGE.

The hair was prepared by washing thoroughly and immersing in a solution of carbolic acid, and before using it is moistened. The advantages claimed were that it can be readily procured, it is not irritating, and the size of the drainage-tube can be diminished at will by the removal of some of the hairs.

DR. MOORE, of Rochester, regarded horse hair as one of the best materials for drainage, and also referred to the advantage which it afforded of readily diminishing the size of the drainage material.

DR. W. W. POTTER, of Buffalo, next read a paper on

DYSMENORRHŒA; ITS TREATMENT BY DILATATION,

of which the following abstract is presented:

1. That, in dysmenorrhœa, pain bears no special relation to the calibre of the cervical canal. In other words, though the channel of exit may possess sufficient patency to convey the menstrual fluid outwards with freedom, it is not a contraindication for the use of the dilator.

2. That the ready passage of the uterine probe or sound is not sufficient proof that the uterine orifices are free enough to contraindicate the necessity of dilatation. Cervices of large calibre often demand dilatation for the relief of dysmenorrhœa.

3. That anteflexion and stenosis, though frequently coexisting with dysmenorrhœa, are by no means always in the relation of cause and effect to the malady, but are, quite as frequently, mere coincidences of it. Many women have one or the other condition, and yet do not suffer with painful menstruation.

4. That the complications of dysmenorrhœa known as hystero-neuroses — the reflexes of the disease itself — frequently obscure the real malady to such an extent as to mislead in both diagnosis and treatment; but these are the cases, belonging as they do to the neurotic variety of the disease, which generally derive great benefit from dilatation.

5. That in the neurotic form of the affection the structures about the internal os will, speaking generally, be found very sensitive, considerably thickened, especially along the anterior wall of the cervix; near the os uteri internum, dense and hard, resisting the dilator with considerable obstinacy. This hyperæsthetic structure appears to be the real seat of the neurosis.

6. That in the neurotic form of dysmenorrhœa the indication of treatment is to stretch out this hypertrophic and hyperæsthetic tissue, with a view to obtain its resolution and absorption. When this is accomplished, the structures near the orifice of exit, *i. e.*, both above and below the so-called internal os, do not as readily take umbrage at the phenomena of menstruation, and thus the patient happily escapes the pain which has heretofore been associated with the performance of this function.

7. That for this form of the malady moderate consecutive dilatation, with graduated vulcanite or metallic bougies, possesses advantages over the more radical method with the two-bladed expanding dilator, which completes its work at a single sitting: for, whereas the latter instrument stretches the parts laterally, thereby increasing the transverse diameter of the channel of exit only, the former not only dilates the entire lumen of the passage, but, what is of even greater importance, by steady and repeated pressure, it promotes absorption of the hardened and thickened tissues wherein resides the neurosis.

8. That to secure success of the measure it is important that firm fixation of the uterus should be obtained, either by double tenaculum or volsellum, and to this end the Sims's speculum and the semi-prone position are indispensable. The single tenaculum will often tear out, and, besides, does not hold the cervix with sufficient firmness. In many cases an anæsthetic will be required, but, when possible, it should be omitted as unnecessarily complicating the procedure.

9. That it is of less consequence to make the dilatation extreme than to do it well. A moderate amount of stretching, properly done at regular intervals, seems to secure better ultimate results than a more radical single dilatation of the passage.

10. The theory is offered that the dilators relieve the suffering from the agonizing pain of the malady much on the same principle that nerve-stretching relieves ordinary neuralgias.

11. Finally, let it be remembered that the foregoing remarks are intended to apply, particularly, to a class of cases which may be designated as neurotic, or belonging to the neurotic form of dysmenorrhœa, in which the channel of exit, though apparently large enough to carry off the menstrual flux, nevertheless possesses little or no resiliency, and in which, furthermore, at the point where the uterine cavity merges into the cervical canal the tissues are thickened, metamorphosed, and hyperæsthetic.

The following papers were read by title:

Two Cases of Rupture of the Heart, by DR. T. H. SQUIRE, of Elmira.

Biographical Sketch of the Late James Rushman Wood, M.D., LL.D., by DR. FREDERICK S. DENNIS.

Biographical Sketch of the Late Dr. J. F. Jenkins, by DR. G. J. FISHER, of Sing Sing.

Biographical Sketch of the Late Dr. G. W. Bradford, by DR. C. GREEN, of Homer.

The Medical Society of the State of New York in its Relation to Sanitary Science and Public Health, by DR. E. HARRIS, of Albany.

Biographical Sketch of the Late Dr. James S. Bailey, by DR. J. C. CURTIS, of Albany.

EVENING SESSION.

DR. PIFFARD called up the communication from

THE ONTARIO COUNTY MEDICAL SOCIETY,

which had been laid on the table at the morning session.

THE CODE OF ETHICS.

Dr. Piffard moved that it be placed on file, and that the Secretary be instructed to notify the Ontario County Medical Society that any by-law adopted by that Society, which is not approved of by this Society, will have no legal force.

The statute of 1880 provides that county medical societies shall make such rules and regulations as they may desire, provided the action of such society receive the sanction of the State Society. The adoption of the Code of Ethics of the American Medical Association is not approved of by this Society, and therefore a by-law to that effect cannot be legal.

DR. CRITTENDEN, of Ontario, said that the object of the resolution was that the delegates from this county should use all honest means to influence the State Society to repeal what is called the New Code. It has nothing to do with a by-law.

DR. PIFFARD did not assume that this communication was presented with such an object, but many of the County Societies think that they have the right to adopt any by-law that they wish. Such is not the case. In order to be enforcible, it must receive the sanction of the State Society.

The motion was passed.

THE DELEGATE from NIAGARA COUNTY presented a series of resolutions in favor of the National Code of Ethics, which was received and ordered to be entered on the minutes.

DR. PIFFARD moved that if there be nothing further in the special order of business, the routine business of the Society be taken up.

DR. MOORE, of Rochester, said that we came here for a special purpose. Everybody knows what it is for. I had not intended to say anything. I supposed that Dr. Didama would be here and bring forward the resolution presented last year. In the absence of Dr. Didama, I ask for the reading of this resolution.

The resolution was read as follows:

Resolved, That all action taken at the annual meeting of 1882, in regard to changing the CODE OF ETHICS be repealed, leaving the CODE to stand as it was before such action was taken.

DR. T. F. ROCHESTER, of Buffalo, moved the adoption of this resolution, and in making the motion, he said: I do it with the hope of restoring the unity, harmony, and good feeling of the proudest society in the Union. I hope that the remonstrances which have been sent in from the county medical societies will not simply be tabled, and no attention paid to them. That was done last year. I think that perhaps we have all given way too much to our personal feelings. I think that on both sides party ties have been stronger than they should be, and not in the interests of harmony. We should try to do what is best for the profession at large. I believe that there is a very strong feeling in the profession against the existence of the New Code of Ethics. If we go back to its inception, we find that when it was passed there were only seventy members present, nevertheless it was legally passed.

At Cleveland, last year, the attempt was made to do what should have been done before the State Society took the position of seceding from the American Medical Association. The question as to whether any modification of the by-laws was necessary should have been brought before the American Medical Association. The attempt was made in that direction last year, but the motion would not be entertained for a moment, because this Society was in a state of rebellion. I do not believe that such a motion will be entertained as long as the New Code prevails; but I do believe that if this Code should be repealed and the Old Code restored, the members of this Society could bring the matter before the American Medical Association, and it would be received and acted upon.

DR. H. D. DIDAMA, of Syracuse, made a few remarks in the same spirit as those of Dr. Rochester, and asked, in the interests of harmony and the good of the profession, that the New Code should be repealed.

DR. ROOSA, of New York, stated that it was the intention of those who were in the majority in the City

and in the State of New York to allow the voting on this question to proceed without any remark, but since at least two new arguments or elements have been presented to the Society, both in its meetings and through the columns of the daily press, it seems proper to refer to them. The one argument is based on a threat which we hear whispered, that, unless certain circumstances occur, a new State Society is to be organized. They come to the meeting with the olive-branch in one hand and the hatchet in the other. This is the harmony of which they speak.

Dr. Jacobi, of New York: I simply call for the question, as I am sure that the members here have come for the purpose of voting, and that not a single word that has been spoken will have any influence.

Dr. Moore, of Rochester, said that he considered it very dishonorable for a Society, after agreeing to certain articles, to throw them off and contemn them, without consultation with the sister States, in connection with whom they were adopted.

The question was again called for. The result of the vote was 105 in favor of the repeal of the New Code, and 125 in opposition.

NO CODE.

Dr. Roosa: Inasmuch as I stated that if a proper opportunity should again occur I would give the members a chance to vote on the abolition of all codes, if any one who voted in the minority makes this motion, I will second it.

Dr. Jacobi: As no member seems willing to profit by the invitation, although I did not vote with the minority, I move the adoption of the amendment as follows:

"The Medical Society of the State of New York, in view of the apparent sentiment of the profession connected with it, hereby adopt the following declaration, to take the place of the formal Code of Ethics, which has up to this time been the standard of the profession in this State:

"With no idea of lowering, in any manner, the standard of right and honor in the relations of physicians to the public, and to each other, but, on the contrary, in the belief that a larger amount of discretion and liberty in individual action, and the abolition of detailed and specific rules, will elevate the ethics of the profession, the medical profession of the State of New York, as here represented, hereby resolve and declare, that the only ethical offences for which they claim, and promise to exercise the right of discipline, are those comprehended under the commission of acts unworthy a physician and a gentleman.

"*Resolved*, Also, that we enjoin the county societies and other organizations in affiliation with us, that they strictly enforce the requirements of this code."

Dr. Agnew then described the working of the committee that had formulated the New Code.

Dr. Jacobi: When I made this motion I did not expect that it would excite much discussion; I did not want to keep the Society until three o'clock. But as it seems likely to do so, I request that the meeting allow me to withdraw my motion.

A motion was made to this effect, but its seconder, Dr. Furbeck, declined to consent to its withdrawal.

A motion to adjourn until 10 A.M. was then put and carried.

Wednesday, February 6th, Second Day.

Morning Session.

After the reading of yesterday's minutes,

THE TREASURER'S REPORT

was presented, exhibiting a balance of $1462. The report was referred to the Auditing Committee.

Dr. W. C. Wey, of Elmira, presented a

REPORT FROM THE COMMITTEE ON BY-LAWS,

with a resolution that the Committee on By-laws be instructed to prepare a scheme for the government of County Medical Societies, which shall be in conformity with the laws of the State of New York and of this Society, and to forward it to the County Societies.

Dr. Jacobi, of New York, from the

COMMITTEE TO COÖPERATE WITH THE SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN,

reported that a hospital for diphtheria and scarlet fever had been organized in New York, and would soon be ready for occupation. The Committee offered the following resolution, which was adopted:

Resolved, That the State Medical Society deeply regrets the failure of the Legislature last year to enact the law proposed by its committee for the protection of children engaged in factory work, and respectfully commends the subject to the attention of the present Legislature, with the hope that definite action will be had in the matter, which is of grave importance and deep interest to all humane persons.

PRINTING THE MINUTES.

Dr. Piffard, of New York, offered the following:

Resolved, That the Secretary be authorized to have printed a sufficient number of copies of the business proceedings of this Society to supply every member with a copy, and that a sufficient number be sent to the secretaries of the county societies for the use of their members. Adopted.

Dr. E. V. Stoddard, of Rochester, from the

COMMITTEE ON HYGIENE,

reported that during the past year there had been no tendency to any general epidemic. Measles of a mild type had prevailed. Attention was called to the lack of proper precautions to prevent the spread of contagious diseases.

Dr. F. R. Sturgis, of New York, from the

COMMITTEE ON LEGISLATION,

reported the draft of an Act, of which the following are the main features:

Section 1. The Governor shall appoint the Medical Faculty of the University of the State of New York, to consist of nine members, who shall be authorized practitioners of physic and surgery in this State, but none of whom shall be connected with any medical school or college which grants the degree of M.D.; provided, that in the appointments made the representation of the several systems of medical practice recognized by the incorporated medical societies of this State shall be in the proportion of six, two, and one, that is to say, the system having the oldest date of incorporation to have six, the next oldest to have two, and the remaining one to have one representative; and all persons desiring to enter upon the practice of physic

and surgery in this State, after November first, eighteen hundred and eighty-four, shall, before doing so, comply with the provisions hereinafter prescribed, and obtain the license hereinafter provided.

Sect. 2. Of the nine members of the said medical faculty, three shall serve, in the first instance, for three years, three for four years, and three for five years; and these terms shall be severally distributed by lot at the first meeting of the said faculty. All appointments made in the faculty at the expiration of the several terms fixed above shall be made uniformly for the period of five years each. All vacancies occurring in the said faculty, from whatever cause, shall be filled by the Regents of the University, on the basis arranged in Section 1; in case the several State medical societies shall nominate physicians to fill such vacancies, the Regents shall appoint some one of the physicians so nominated. The Regents may, for cause, remove from office any member of the faculty, after due notice, and an opportunity to be heard.

Sect. 3. The said medical faculty shall examine all applicants for license to practise physic and surgery in this State. The members thereof shall meet at least semi-annually, and at such meetings shall faithfully examine all candidates referred to them for that purpose by the Chancellor of said University, and each furnish him a report in writing of his opinion as to the qualifications and merits of each candidate, referring briefly to the degree of proficiency evinced by the applicant in the branches in respect of which he was examined by him; which opinion shall be by him denominated favorable or unfavorable.

Sect. 4. Such examination shall be in anatomy, physiology, histology, pathology, theory and practice of medicine, chemistry, surgery, obstetrics, materia medica and therapeutics, and such other branches in the several departments of medical science as the said faculty may agree upon, subject to the approval of the Regents of the University.

Sect. 6. Any person, on paying fifteen dollars into the treasury of the University, and on applying to the Chancellor for the aforesaid examination, shall receive an order addressed to the aforesaid medical faculty, instructing them to examine the candidate.

Sect. 7. The Regents of the University, after finding that seven or more of the members of said faculty participating in the examination have given an opinion in favor of a candidate, shall issue to him or her a license to practise physic or surgery in the State of New York, for which license the candidate shall pay to the University the further sum of ten dollars. Said faculty may refuse to recommend a license to any individual guilty of dishonorable or criminal conduct, and for like cause, after giving the accused an opportunity to be heard in his or her defence, the Regents of the University may revoke said license.

Sect. 8. The moneys paid to the University under the provisions of this Act, shall be appropriated by said Regents for, and shall defray all expenses incurred under the provisions of this Act.

Sect. 9. Of the medical faculty, seven members shall constitute a quorum.

Sect. 10. Subsequent to the first day of November, in the year eighteen hundred and eighty-four, every person (except such as have before such date lawfully registered pursuant to the laws of the State in force at the time of the passage of this Act), after complying with Sections six and seven of this Act, shall, before commencing to practise physic or surgery, register in the clerk's office in the county where he or she practises or intends to practise physic or surgery. Nothing in this Section shall be so construed as to prohibit medical consultations in the different counties of the State between legally qualified and registered physicians of this and other States.

DR. PIFFARD, of New York, moved that the report be accepted and entered on the minutes.

DR. C. R. AGNEW, of New York, asked why no report had been made on the bill presented yesterday by Dr. Wey, and referred to the Committee on Legislation. He moved that the report of the Committee be laid on the table.

DR. ROOSA raised the point of order that Dr. Piffard's motion was before the house, and that it must be disposed of before another motion could be entertained.

THE PRESIDENT decided the point well taken.

Dr. Piffard's motion was then adopted.

DR. AGNEW then moved that the Committee on Legislation be instructed to act upon the order of the House in regard to the bill presented by Dr. Wey.

DR. ROOSA objected that it was not courteous to the committee to try to force upon it a bill which, otherwise, it would not have entertained. There was nothing, he said, to prevent any member from introducing any bill he might desire.

DR. PIFFARD stated that, according to the by-laws, all resolutions touching medical legislation must be referred to the Committee on Legislation, who shall make a report.

DR. STURGIS said that the resolution had not been received by the Committee from the Society; if it had been, it would have been entertained.

Dr. Agnew's motion was then carried.

The Committee on Legislation then made a supplementary report embodying the bill presented by Dr. Wey, of which the following are the main features:

Section 1. From and after the first day of June, 1884, there shall be and continue a Medical Faculty of the University of the State of New York, consisting of nine members, appointed by the Governor, and no member thereof shall be or become connected with any medical school or college. Except as otherwise hereinafter provided, the members shall each hold office for five years.

Sect. 2. Upon the written recommendation of three-fourths of the Medical Faculty, the Governor may remove from office any member of the Faculty.

Sect. 3. From and after the first day of November, in the year 1884, no person not theretofore lawfully authorized to practise physic and surgery in this State shall enter upon or be admitted to such practice unless lawfully licensed, after examination by or under the supervision of the Medical Faculty, in the manner hereinafter provided, or unless regularly authorized by the diploma of some legally incorporated medical school or college in this State.

Sect. 4. From and after the first day of November, in the year 1884, excepting persons regularly authorized by the diploma of some legally incorporated medical college in this State, and except as provided in the seventh section of this Act, any person not theretofore lawfully

authorized to practise physic and surgery in this State, and desiring to enter upon such practice, may, upon payment of twenty-five dollars into the treasury of the University, deliver to the Regents of the University a written application for license, together with satisfactory proof that the applicant is more than twenty-one years of age, is of good moral character, and has received a diploma conferring the degree of doctor of medicine from some legally incorporated medical college, and thereupon the Regents of the University, through such officer as may from time to time be designated for that purpose, shall issue to such applicant an order for examination by the Medical Faculty.

The examination shall be in and upon the several departments and branches of Medical Science as the same shall have been designated by the Medical Faculty, with the approval of the Regents of the University.

The questions propounded shall be such as from time to time shall have been determined and designated by the Medical Faculty, subject to review by the Regents of the University, and written answers to such questions shall be required.

Sect. 6. The Regents of the University shall issue to every such applicant who shall have been so examined, and as to whom a "favorable" opinion shall have been delivered by seven or more members of the faculty participating in such examination, a license to practise physic and surgery in the State of New York. Such license shall be delivered only upon payment of the sum of fifteen dollars into the treasury of the University, and shall entitle the person so licensed to practise as aforesaid until such license shall have been revoked for cause, as hereinafter provided.

Sect. 7. From and after the first day of November, 1884, the legally authorized medical schools and colleges in this State shall issue diplomas conferring the degree of doctor of medicine and the right to practise physic and surgery within this State after examination under the supervision of the medical faculty in the following manner: Whenever any such school or college shall propose to make any such examination, it shall give to the medical faculty notice thereof in the manner which shall have been previously prescribed by the medical faculty, which shall, without delay, designate and appoint three of its members to attend such examination. The questions to be addressed to the candidates for degrees at such examination shall be submitted to the members of the medical faculty attending such examination, and all answers thereto shall be open to their inspection. The expenses of such attending members of the medical faculty, and the compensation of each member, at the rate of twenty-five dollars per diem for each day spent in going to or from, or attending such examination, shall be paid by the medical school or college at which such examination shall be had.

Sect. 8. The medical faculty may, by a two-thirds vote, after having given to the person to be affected an opportunity to be heard, recommend to the Regents of the University the revocation of any license issued under the provisions of this Act, or of any right to practise physic and surgery under any diploma hereafter issued, because of professional incompetency or misconduct, and unless the Regents of the University shall upon the record decide that such recommendation is not well founded, the license so issued and the right to practise under such diploma shall be withdrawn, from and after the time when such recommendation shall have been made by the medical faculty, and unless and until such recommendation shall have been overruled by the Regents of the University, the person accused shall not practise physic or surgery in this State, and any license issued under any former Act may be similarly revoked for unprofessional or dishonorable conduct subsequent to the passage of this Act, and after such revocation the person affected shall not practise physic or surgery within this State.

Sect. 9. The medical faculty may, by a three-fourths vote, recommend the Regents of the University to vacate, annul, or suspend the charter of any medical college or school within this State, and the Regents of the University, after giving to such medical college or school, through its trustees or directors and faculty, a proper opportunity to be heard, may, by a two-thirds vote, adopt such recommendation in whole or in part, and may vacate, annul, or suspend the charter of such medical school or college, or may make such determination or order as in the matter may seem proper, and thenceforth the rights and powers of such medical school or college shall exist, and be exercised only in subordination to such determination of the Regents of the University.

Sect. 12. Subsequently to the first day of November, in the year 1884, every person (excepting such as may have theretofore lawfully registered pursuant to the laws of the State) being licensed under sections six or seven of this Act shall, before commencing to practise physic or surgery, register in the Clerk's office in the county where he or she practises or intends to practise physic or surgery. Nothing in this section shall be so construed as to prohibit medical consultation in the different counties of the State, between legally authorized and registered physicians of this and neighboring States.

DR. PIFFARD moved the adoption of the supplementary report. Passed.

DR. STURGIS stated that the last bill reported had been considered by the Committee, and had not met with its approval.

DR. H. R. HOPKINS, of Buffalo, offered the following:

Resolved, That the report of the Committee on Legislation be accepted.

That the Committee be instructed to use all proper efforts to secure the passage through the Legislature, of the bill favorably reported, with any necessary amendments. That a copy of these resolutions, with the official signatures of the President and Secretary, be transmitted to both houses of the Legislature without delay.

He stated that the profession at large, as he thought from extensive correspondence, would endorse these resolutions.

DR. A. L. LOOMIS, of New York, said that this was an important matter affecting the profession at large, and also every medical college in the country. He called attention, in the first place, to the composition of the Board of Examiners. In the one reported unfavorably, it consisted of gentlemen not connected with any medical college. In the one favorably reported, of gentlemen not connected with a college which grants the degree of M.D. The latter recognizes certain sects in the profession. The great points of difference are in the composition of the Examining Board and the powers of

this Board. The one is supervisory, the other absolute. The Supervisory Board have power to examine men coming from outside the State and to investigate the teachings of the different colleges in the State. If these are irregular, they have the right to report to the Regents, recommending the withdrawal of their charter. It has power to silence all bogus schools. There is no such provision in the other bill. The objections to the bill reported favorably are that the Board is taken from the non-teaching body; England tried this, but it was a failure. In France, the Examining Board was taken from the teaching body. In Germany, the Board was mixed. It is said that other States have tried this plan, but in many it has failed. It is not safe to separate the Examining from the Teaching Board. In regard to compensation, we reject ten to twenty per cent. every year, but they pay the same whether they graduate or not. The compensation allowed by the bill is insufficient, not amounting to more than seven hundred dollars per member, the time required for thorough examination being not less than two months. He objected to the power over the curriculum of the college, as it gave power to theorists to insist upon the teaching of their hobby.

DR. ROOSA thought that if it was difficult to find nine men who would not insist upon teaching their theories, it would be equally difficult to obtain nine men for a Supervisory Board. We are willing to accept any amendment that does not eviscerate the Bill. I am informed that if the State Society will agree on some course of action, that there is a probability that the bill will be adopted at this meeting of the Legislature. In regard to sects, we can get no bill if one of the sects oppose it. It is objected that too much power is given to the Board, but it can be no more absolute than that now possessed by the medical faculties.

DR. PIFFARD read the proceedings of the last meeting bearing upon this subject, and referred to the history of the bills. He had heard that in a conference held recently in New York, its advocates had changed the ratio of representation from six, two, one, to five, three, and one. Seven constitute a quorum, and four or three members might declare that it was necessary that every medical college in the State should teach homœopathy. He then reviewed some of the other sections. He thought that both bills should be referred to a special committee.

DR. JACOBI thought that, if the Society would do nothing, the Legislature would take the matter into its own hands. He moved that when the Society adjourn, it adjourn until three o'clock, and that this matter be taken up at half-past four, and finally decided before adjournment; the motion was amended so that the bills be taken up at three.

AFTERNOON SESSION.

DR. L. HOWE, of Buffalo, thought that the object to be attained could be better reached through the Society itself than through the Legislature; and that the Society could appoint a committee to have supervision of the medical colleges; and he offered this

AMENDMENT.

That a committee be appointed to draft a plan whereby a Commission should be organized, whose duty it should be to attend the examinations of the medical colleges, take cognizance of the methods and the excellencies or defects of such examinations, and report the same each year at the annual meeting. The committee to report such a plan during the present session.

DR. DALTON, of New York, seconded the amendment, and spoke at length in its favor. He was opposed to legislation on this subject. Both bills presented the defect which it was one of their objects to remedy. To take away the inducement of increased fees which come with the increased number of students, the bills provide that the examining board shall be paid from the fees collected from those examinations. He did not believe that in either instance this would be the case. Either bill would diminish the efficiency of the teachers by taking from them the responsibility; also, it is evident that the balance of power is in the hand of the eclectics.

Dr. Howe's motion was laid on the table to allow of the introduction of a substitute by Dr. Hopkins, to obtain an expression of opinion by the meeting, whether or no an examining board was wanted.

DR. PIFFARD moved as an amendment to Dr. Hopkins's motion, that the matter be referred to a committee, consisting of Drs. Loomis, Curtis, and Vanderveer, with the Committee on Legislation, and that this joint committee be instructed to report a bill at the next annual meeting.

A number of members spoke in favor of the motion.

The amendment was carried, and Dr. Hopkins's motion as amended was adopted.

THE REPORT OF THE COMMITTEE ON PRIZE ESSAYS

was on motion reconsidered. A majority report embodying the features of the report made on Tuesday, was presented.

DR. W. W. POTTER, of Batavia, presented a minority report, stating that the essay to which it was recommended by the majority report to award the prize, was, in his estimation, unworthy of it. While an excellent paper, it did not reach the standard. He therefore recommended that the prize be not awarded.

DR. VANDERVEER moved that the minority report be accepted. He said that the same essay had been presented to the New York County Society, and had been rejected. It was made up largely of extracts.

The motion was carried.

DR. MITTENDORF then read a paper on

FÖRSTER'S METHOD OF RIPENING CATARACT.

It is a well-known fact that if the lens be injured it may become opaque. Acting on this, Förster advised iridectomy for the purpose of ripening senile cataract. The indications for the operation are cataract in both eyes at the same time; loss of one eye, the other becoming cataractous; where one eye is diseased, and on account of that disease cataract develops in the other eye; where the patient is going beyond the reach of skilled help. The operation consists in an iridectomy, and then gently rubbing the cornea with the blunt angle of a strabismus-hook. The after-treatment consists in keeping the patient for a few days in bed, and instilling a weak solution of atropine. Complications are to be treated as in other cases. The results are favorable. In two cases the cataract ripened in four days; in the majority

in four weeks. The operation is not entirely devoid of danger. It is to be performed in exceptional cases. In twenty patients operated on, only three had serious inflammatory complications.

DR. SHEEHAN read a paper on *House Sanitation as it is and should be.*

DR. J. B. TODD, of Parish, reported the following case of

SPONTANEOUS PYÆMIA.

A. W., aged fifty-nine, a farmer; previous health and habits good. On the morning of September 23, 1883, he had a severe chill, but he was able afterwards to ride six miles in a wagon. He was much prostrated, and fainted and vomited on the way. At night, he returned to his home. At this time his condition was as follows: Countenance shrunken and bloodless, hands stiff, complained of pain in every part of the body, and especially in the back. He was much prostrated, and could not get to bed without assistance. The temperature was 103°, and the pulse was 90 per minute.

On the 24th the feet were very painful, and felt as though they had been burned. The balls of the toes seemed inflamed; temperature 104°, pulse 95.

On the 25th, the feet were still painful, and there was a deposit of pus about the nails; temperature 102°.

On the 28th, pus was found beneath the skin of the balls of the toes; pustules and spots of ecchymosis were found on the back. He passed into a typhoid state, with semi-unconsciousness and incontinence of urine, and died on the 30th, having been entirely unconscious for the twenty-four hours preceding death.

At the post-mortem, the capsules of the kidneys were readily detached, and beneath them were found a large number of minute pustules.

The treatment consisted in the use of stimulants, with quinine, carbonate of ammonia, digitalis and opium as required, and the administration of nutritious food. It was thought that the probable explanation of spontaneous pyæmia was the formation of a thrombus in the tissues of the lung or liver, the thrombus subsequently undergoing degeneration and producing poisonous materials.

The following papers were read by title: *Care and Preservation of Medical Pamphlets*, by Dr. J. G. Fisher, of Sing Sing; *Strangulated Hernia, Five Cases Treated by Operation*, by Dr. J. Chapman, of Medina; *Notes on the Treatment of Diseases of the Digestive Organs*, by Dr. F. A. Castle, of New York; *Hay Fever*, by Dr. J. O. Roe, of Rochester.

The next paper was by DR. M. JOSIAH ROBERTS, of New York, on

THE CURE OF SPINAL CARIES WITHOUT DEFORMITY.

After describing the physiology of the joints and the necessity of some apparatus which does not fix the joint, he exhibited his apparatus, in which, opposite each joint, there is a sliding arrangement, held together by a rubber band. By this means the nutrition of the limb is increased, and a cure can be effected in one-third less time than by other means.

DR. FOWLER, after considerable experience, had discarded all bandages. He used splints of leather moulded over a plaster cast. This answers all the purposes of traction. In his hands the long Taylor splint was successful, but he had noticed that it failed to make the traction for which it has been introduced and to this failure he attributed its success.

DR. PHELPS then read a paper on

SYNOVITIS OF THE KNEE-JOINT,

and exhibited some cheap forms of apparatus which he had devised for the treatment of chronic inflammation in various joints. The principle on which extension should be applied is that the line of extension should be in the line of the deformity; in any other way, traction will cause pressure on the joint. The apparatus for the knee consists of a tin band above and below the joint, on each side of which bands a loop was soldered, through which a stick passed. The bands are secured to the limb, and the sticks inserted; the limb is then drawn out as far as is desired, and pins inserted in holes in the sticks, maintaining the extension. When powerful extension is desired, where the deformity is marked and the synovitis is old, two bands are secured as before, having a pocket at the posterior surface, which receives the end of a rod, which can be lengthened by sliding through a loop of tin, and secured by a pin. Around the knee and the stick an elastic bandage is applied; for the ankle, a foot-piece, with holes to receive iron side-pieces, is used; the upper ends of these, passing through loops in a tin band, secured to the calf, can be fastened with a pin, as in the previous cases.

DR. W. C. WEY, Chairman of the

COMMITTEE ON BY-LAWS,

reported a resolution approving of certain amendments of the Albany County Society. It also recommended that the Treasurer and Secretary constitute a temporary Committee on Credentials, until the permanent committee be appointed. Adopted.

DR. C. L. DANA, of New York, then read a paper on

MORBID SOMNOLENCE.

He reported fifty cases of morbid somnolence, four of which had come under his observation. The affection is due to different causes, such as old age, diseased vascular conditions, diabetes, dyspepsia, sunstroke, cerebral tumors, and exhausting diseases. After a time the general health is affected, and sometimes the mind gives way. The symptoms show themselves in various ways. Sometimes consciousness is not entirely abolished. The treatment should consist in remedies to remove the cerebral anæmia or hyperæmia. Exposure to sunshine, heat, and noises has been recommended. Sternutatories are recommended. Symptomatic remedies, as coffee, caffein, cocoa, belladonna, nitroglycerine, and nitrite of amyl are also useful.

THE EVENING SESSION

was held in the Assembly Chamber of the Capitol.

THE PRESIDENT, ALEXANDER M. HUTCHINS, A.M., M.D., of Brooklyn, delivered

THE ANNIVERSARY ADDRESS.

He choose for his subject

THE RECIPROCAL ATTITUDE OF THE MEDICAL PROFESSION AND THE COMMUNITY.

He said there is a medical science, but if medicine were a science only, there would be fewer medical

schools than now exist. The former part of this proposition has been denied. The impression is prevalent that, while much learning has been amassed in medical research, the results thereof are so unrelated, and the conclusions so untrustworthy as a basis for future observers, that even conceding that some of its methods are scientific, in the catalogue of the sciences it is to be classed among the empirical, and not in the exact.

Medical science assumed her unique place among the sciences when the facts and phenomena, evoked by biological research, were made the basis of investigation, whose purpose is to prolong the vital process and arrest the untoward influences that perpetually threaten its extinction. This is her distinctive mission.

The body of medical science is the slow accretion of the centuries, and the contributions to its learning are too numerous for the historic pen. The results of yesterday are the alphabet of to-day. But seventy-five years have gone since the ovarian cyst was exsected by the grave Kentuckian whose honored memory his grateful brethren have perpetuated by the granite obelisk in the Danville churchyard, and by a skilful use of exceptional opportunity the Scottish chieftain is justly credited with having added hundreds of years to woman's life; and not only that, but, wherever this literature has reached, men, whose names can never become historic, are performing this merciful task with assurance and success. But fourteen years have gone by since the turf hid the gifted German who revolutionized the operation for cataract, but even now, the great centres show a phalanx of men whose skill is greater, as their experience has increased. By the very genius of the science this history of progress and change must always be repeating. The days rapidly hasten on when the names of McDowell and Von Gräfe, of Keith, and Sims will be prominent only as landmarks.

The one hundred years have just passed since Jenner's observations and experiments in Gloucestershire associated his name inseparably with the amelioration of smallpox. Fifty years later Ehrenburg and Dujardin studied and described the various forms of monas, vibrio, spirillum, and bacterium, and the century hardly rounded before Schwann had shown that these bacteria are the cause of the putrefaction of organic substances, and Pasteur had extended this discovery so as to create the belief that all putrefactive changes are due to such minute organisms, when Lister had developed his antiseptic method based on these discoveries; when Koch propounded his theory that tubercular consumption was due to the bacillus; when erysipelas, and glanders, and splenic fever, and malignant charbon were shown to be due to special types of bacteria, and Pasteur had inoculated the attenuated virus of malignant charbon as a protection to cattle and sheep from attacks of the severe forms of the disease.

These discoveries increase rather than remove our doubts as to what lies beyond, but their far-reaching results, of which the foregoing are but hints, are the product of the present decade of investigation, and we stand but at the threshold of these directions of biological research.

The attitude of the community toward scientific study is, primarily, that of antagonism. Innovation provokes opposition. There are many years, but one sentiment, between the persecution of Galileo and the onslaught on vivisection. Popular government has never initiated any movement to promote research, for that implies a cultivated sentiment among the voters, and the English-speaking nations have done almost nothing in the way of State appropriations for scientific study. Germany, France, Russia, Holland, Belgium, and Italy are, almost exclusively, the originators of the later methods. From their laboratories have come the great discoveries of modern times, and this, because in these countries the laboratories have been under State patronage. The most that has been done in England and the United States, has been done by those men whose capacity for scientific discovery has been accompanied by the possession of private fortune; the remainder has come from work incidental to the occupation of professional chairs.

In this country, neither the nation, nor, to my knowledge, any State has done the first thing to further scientific research directly. Much has been done for industrial education, and a great deal of research is really carried on under cover of State and government appropriations, but all is of secondary moment to the powers that be.

Scarcely any provision has been made until recently for biological science in an institution of learning, beyond elementary instruction. New research is contemplated in a few, notably in the Johns Hopkins laboratory and in the investigations by Dr. Martin in Chesapeake Bay and at Hampton. This enterprise is due to private beneficence, and its results, especially in investigating the various modes of propagating the oyster, have induced the State to promote further studies in this single direction.

The cultus of medical science must continue to share the experience of all original investigation and remain a personal factor among the diverse directions of human industry. Multitudes stand ready to seize the results of its labors and apply them, in ways that men can understand, to the satisfaction of human need. They who cull the flowers, enjoy the fruit, reap the harvest or sell the crop, are of different mind and other station than they who till the ground, plant the seed, nurture the sapling and wait, through recurring seasons of sun and snow, till the sturdy limbs are shelter and refreshment to the unthinking life that recks not of its benefactors.

There is an art of medicine and its multitudinous votaries attest the fruitfulness of its pursuit.

In 1880 the States and Territories of this country held a population of 50,155,783, and of these, 85,671 persons were enumerated as either physicians or surgeons, a proportion of 1 to 585. In the State of New York there were 5,082,783 persons, of whom 9,272 were doctors, a proportion of 1 to 548. What the ample front doors of the medical colleges, with the signatures of numerous licensing bodies, have done, during the past four years, to swell the total, it would be hazardous to speculate upon. But these salutary, health-forecasting and longevity-producing statistics stamp the effete and tottering governments of Europe with the die of derision, in their infamous disregard of human comfort, and put an extra gilding on Columbia's protecting ægis, prolonging the beauty of her daughters and the bravery of her sons; for while the proportion of doctors to population in Switzerland is 7.06 per 10,000, in Italy 6.10, in Hungary 6.10, in England 6, in Austria 3.41, in Germany 3.21, and in France 2.91, the United States with her 17.1 per

10,000 have consummated what Berkely foresaw, but did not dare to write—

"Westward the doctor's empire has full sway."

It is asking too much of credulity to believe that the attitude of the profession is friendly to the community, when the lavish gift of the doctorate puts into so many undisciplined hands the medical arts which are as potent for evil as for good.

Humiliating and unsavory though it be, the pregnant fact holds true, that, coupled with that large body of men who acknowledge an ancestry of scholars and faithful students of nature, who base their art on principles which have survived criticism, who practise their art in the interest of the physical and spiritual well-being of their fellow-men, whose livelihood is a legitimate product of their worthy and acceptable service, there is another and large class, known not only to the census enumerator but to the community, by the same name, with equal protection under the law, who, with insufficient culture and consciences dulled through habitual and ignorant tampering with grave responsibilities (described lately by an influential medical journal as "hangers-on of whom any party would be ashamed"), who are a standing menace to the community, which, accepting all as competitors in the race, gives to all alike its patronage and its support.

While the history of research has proved that the community has been slow to recognize its duty to scholars, in facilitating their inquiries into the facts and phenomena of physical life, which have developed laws and expedients so important and far-reaching in their influence on the well-being of the race; yet the contrary holds true in the attitude the community sustains to medical art. Certainly, in this country at least, in the broadest sense, up to the limits of its education, the community has been a lavish patron of the agencies that alleviate disorder and a co-worker in enforcing the instrumentalities which prevent disorder.

Certainly the community is not slow to accept the offers of mercy, for while it submits patiently to all that is ordered by the profession, takes all its medicaments, undergoes all its operations, awaits the results of all its experiments, and, unhesitatingly, believes everything it says, and quotes it, more or less correctly, for the neighborly benefit; the community, in its charity towards all, does not allow the profession monopoly in the practice of medicine, but, with its faith in drugs, and measuring their efficacy by the violence of their operation, it swallows on bare printed promises $60,000,000 in proprietary medicines per year, and assists the fortunes of drug dealers to the extent of $80,000,000 per annum more.[1]

It is estimated that three-fourths of those enumerated as physicians and surgeons are up to the limits of their individual competency, applying to the healing of human ills the best methods of experience, based on the knowledge derived from scientific research. The remaining 20,000 are an *olla podrida* of every conceivable specialty, having the common bond of applying each his own special method of cure to all diseases. The particular mode of cure is the trade-mark to attract patronage. If any is honest enough to vary his method of cure, with the hope of benefit to his patron, he is dishonest to his advertisement. If any are so bigoted as to believe that one mode of cure is applicable to all diseases, or if any are so rigidly adherent to their special trade-mark as to apply it to all, regardless of all consequences save their personal gain, the community is not only defrauded but damaged. It would be idle to deny that each trade-mark covers some truth, or that some useful thing has been the stock in trade of some peripatetic healer, as witness the carbolic acid injection for hemorrhoids. It is very doubtful if scientific medicine is wanting in any of the appliances, which, taken alone, are the stock in trade of the exclusive practices.

The personal factor enters so largely into individual success in the practice of medicine, that the community judges of results mainly by its observations of the mode by which the results are obtained. The community is influenced less by a system of practice than by its confidence in the man in whom it has trusted. The community is as incompetent to decide upon the merits of the former as it is capable of being deceived by the skilful manipulation of the latter. This personal factor makes personal character take front rank in qualification for medical practice. The community may suffer seriously by its patronage of nostrums and exclusiveness, but the community undergoes greater peril and the *corps d'esprit* of the medical profession is outraged infinitely more by the incompetency to which it has given its diploma, and by the dishonesty and trickery in its ranks, which it sees and cannot control. Whoever can deny the one or the other is blind to human frailty, and he is to be credited with angelic confidence too pure and ethereal for this "vale of tears." The physicians who are floundering through the uncertainties that ignorance imposes, or who abuse the confidence of the community for purposes of gain; who will take any other course than to tell the truth and employ the most experienced devices to secure the speediest results, are beyond the reach of all codes, whether of human or archangelic contrivance. And yet the profession, in all consistency, having granted those the degree with a free heart and a God-speed, must consult with them on equal terms, and, in an emergency, defend them in the public confidence. To turn a child from the door as an outcast is inhuman.

[1] These figures are, doubtless, far below the actual facts. The census reports 563 patent medicine establishments, producing $14,682,494, and 8,592 drug and chemical establishments producing $38,173,658. Three times this amount, distributed through the 30,000 drug stores, would give an average total sales for each of $5,000.

THURSDAY, FEBRUARY 6TH, THIRD DAY.

MORNING SESSION.

DR. E. L. PARTRIDGE, of New York, read a paper on the

MANAGEMENT OF FACE PRESENTATIONS.

He said that the transformation into face presentations occurs within the last two weeks of pregnancy. He narrated a number of cases in which, under chloroform, he introduced the hand and converted a face into a vertex presentation. He proposed the questions: "Is it desirable to effect a change to vertex? and Is the operation easy and free from danger?" The favorable circumstances are: dilated os, a face easily lifted from the pelvic brim, unruptured membranes, and capacious vagina. The operation is easy, it being only necessary to introduce the finger into the uterus.

DR. A. JACOBI, of New York, read a paper on

ARSENIC AND DIGITALIS IN PHTHISIS.

He said that arsenic in small and frequent doses improves the connective tissue growth, which is probably due to the action on the cells themselves. Consumption is usually of long duration, and nutritive disorders are frequent. Arsenic is the best alterative and nutritive which we can employ. He does not use it while hectic fever is high, but when the temperature falls arsenic in small doses is a very valuable agent in doses of from one-fifteenth to one-sixth of a grain, with little opium. Digitalis is also valuable. Almost the universal method of use is a grain and a half of the extract combined with other remedies indicated; this may be continued for weeks. When there is no fever iron may be given. In anæmia, digitalis is an excellent tonic with iron, nux vomica, and arsenic.

DR. DRAKE agreed with Dr. Jacobi, but he thinks arsenic is more useful in the second stage. He uses it to reduce the temperature. Digitalis is used in Bellevue Hospital in almost all cases of pneumonia, and in all cases of alcoholic pneumonia.

DR. W. WOODWARD, of Big Flats, reported

TWO CASES OF POISONING BY TANSY.

Case I.—An unmarried girl, aged twenty-one, was seen September 21, 1879. She had been found in an outside cellar in an unconscious condition, having convulsions, and frothing at the mouth. She had never had fits before. The menses had stopped in the preceding February, and, from the enlargement of the abdomen, it was supposed that she had dropsy. She had been advised by a relative to take something to bring on the menses, and an examination of the drug taken showed it to be oil of tansy. On examination, the abdominal enlargement was found to be due to pregnancy. She recovered from the effects of the drug, and in the following December was delivered of a child said to have been stillborn.

Case II.—Mrs. W. G., aged twenty-nine, was seen June 16, 1882. In the early part of the morning, she appeared to be perfectly well, but about nine o'clock she felt dizzy, became partially blind, and passed into an unconscious condition in which she remained for an hour, when she partially recovered, and sent for assistance. At two o'clock P. M., the temperature was 100°, the pulse 80 per minute, and the respiration slow, but not stertorous. She could speak in a whisper, and could see large objects, but was unable to recognize individuals. She became faint whenever the head was raised from the pillow. On questioning her, it was found that for the preceding three days she had been drinking an infusion of tansy, and injecting the same into the vagina with the intention of producing abortion, being so engaged when she first fell on the floor. A vaginal examination showed the os uteri closed, and the lips patulous and soft.

About nine A. M. of the 17th, she became convulsed with clonic spasms, and lost consciousness. There was a second attack at three P. M. From four to five P. M., there were partial loss of consciousness, blindness, and slow respiration (fifteen per minute). It was said that during the paroxysm the respirations were stertorous. The pulse was slow or normal, and there was no disturbance of the bowels or of the urinary apparatus. Not receiving encouragement in her efforts to produce abortion, she consulted another physician. Shortly afterwards she had a miscarriage.

THE NOMINATING COMMITTEE

then presented the following report, which was adopted:

President.—Dr. B. F. Sherman, of Ogdensburgh.

Secretary.—Dr. William M. Smith, of Syracuse.

Treasurer.—Dr. Charles H. Porter, of Albany.

Censors.—Southern District: Drs. F. A. Castle, Geo. H. Fox, D. Webster. *Eastern District:* Drs. E. D. Fergusson, N. L. Snow, LeRoy McLean. *Middle District:* Drs. A. Churchill, J. K. Chamberlayne, Frazer. *Western District:* Drs. T. F. Rochester, B. L. Hovey, T. Dimon.

Committee on Ethics.—Drs. A. Jacobi, A. Matthewson, C. E. Whitbeck.

Honorary Member.—Dr. Wm. G. Bronson, of Connecticut.

Adjourned.

NEWS ITEMS.

ALBANY.

By Telegraph to our Special Correspondent.

THE NEW STATE MEDICAL SOCIETY.—On Wednesday morning a meeting of the adherents of the National Code of Ethics was held at the Delavan House, and the New York State Medical Association was organized. The following officers were elected:

President.—H. D. Didama, M.D., of Syracuse.

Secretary.—E. D. Ferguson, M.D., of Troy.

Treasurer.—John H. Hinton, M.D., of New York.

Dr. Austin Flint, Jr., proposed New York as the next place of meeting, which was adopted. It was resolved that the time of meeting should be the third Tuesday of November.

GASTROSTOMY.—On Thursday of last week, Dr. S. W. Gross, at the Jefferson Medical College Hospital, performed the first stage of the operation of gastrostomy on a woman aged fifty-one, suffering from carcinoma of the œsophagus. On the eighth day the woman's temperature and pulse were normal, and the case was progressing most favorably.

A BILL TO PREPARE AND PUBLISH A NATIONAL PHARMACOPŒIA FOR THE UNITED STATES.—In the House of Representatives, on January 8, 1884, Mr. Randall introduced the following bill, which was read twice, referred to the Committee on Ways and Means, and ordered to be printed.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

That the Secretary of the Treasury shall, as soon as practicable, detail two officers of the Marine-Hospital Service, and the Secretary of War shall detail two officers of the Medical Staff of the Army, and the Secretary of the Navy shall detail two officers of the Medical Staff of the Navy, for the duty of compiling and preparing a pharmacopœia, which shall be known as the *National Pharmacopœia of the United States of America*, and shall

be held and accepted as the standard for the purveying, compounding, and dispensing of drugs or medicinal agents, and shall be taken as authority in the Treasury Department on all questions arising under the tariff laws of the United States with regard to the nomenclature, description, and purity of drugs or remedial agents, and shall further be received as evidence in the United States courts. And the matters contained in the said pharmacopœia shall be free for use by all authors and commentators for the benefit of the medical and pharmaceutical professions and of the community at large; and it shall not be lawful for any one to reprint and publish the said pharmacopœia as a whole.

Sect. II. That the medical officers detailed as above provided shall invite the American Medical Association and the American Pharmaceutical Association, at their next annual meetings, to form committees of not more than three members from each of the said Associations, which committees, if so appointed, may coöperate with the above-named medical officers in the preparation of the said pharmacopœia, forming a board which shall have power from time to time to add to its number as may in its judgment be necessary, and which shall elect a chairman and a secretary, and adopt such rules as it shall see fit for the expediting and perfecting of the said pharmacopœia, which, when completed, shall be printed under the supervision of the said board; and an edition of not less than five thousand copies shall be printed, for use in the several Departments of the Government of the United States; and copies may be furnished to private persons in accordance with the provisions of section thirty-eight hundred and nine of the Revised Statutes.

Sect. III. That for the purpose of defraying the necessary expenses of preparing the said pharmacopœia, the sum of five thousand dollars is hereby appropriated out of any moneys in the Treasury not otherwise appropriated, and the same shall be disbursed under regulations to be prescribed by the Secretary of the Treasury.

Sect. IV. That the said pharmacopœia shall be revised once in ten years, upon the plan embodied in this Act.

PRECAUTIONS AGAINST YELLOW FEVER.—The Secretary of the Treasury has approved the recommendation of Surgeon-General Hamilton, that an immediate inspection be made of the cities bordering on the Gulf of Mexico and the Caribbean Sea, having commerce with the United States, in order that their actual sanitary condition may be known in advance of the yellow-fever season.

THE ALUMNI OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK had their annual dinner on the evening of January 31, at Delmonico's. Dr. Alexander E. McDonald presided. Speeches were made by Drs. Fordyce Barker, S. O. Van der Poel, and others, in response to toasts.

THE DEPARTMENT OF VETERINARY MEDICINE IN THE UNIVERSITY OF PENNSYLVANIA.—We are informed that the organization of this department of the University of Pennsylvania has been completed, and the members of the faculty, with the exception of two or three special teachers, appointed. The faculty includes William Pepper, M.D., LL.D., Provost of the University and *ex-officio* President; Rush Duffen Huidekoper, M.D., V.S., Dean, Professor of Internal Pathology, and *pro tempore* Professor of Veterinary Anatomy; James Tyson, M.D., Professor of General Pathology and Morbid Anatomy; Horatio C. Wood, M.D., LL.D., Professor of Materia Medica, Pharmacy, and General Therapeutics; Theodore G. Wormley, M.D., LL.D., Professor of Chemistry and Toxicology; Harrison Allen, M.D., Professor of Physiology; Joseph T. Rothrock, M.D., B.S., Professor of Botany; Andrew J. Parker, M.D., Ph.D., Professor of Comparative Anatomy and Zoölogy; Robert Meade Smith, M.D., Professor of Comparative Physiology; —— ——, Professor of Surgical Pathology and Obstetrics; Adolph W. Miller, M.D., Ph.D., Demonstrator of Pharmacy; Henry F. Formad, M.D., B.S., Demonstrator of Pathology and Morbid Anatomy.

The course of study extends over three years, the year beginning October 1 and ending on June 15. The requirements for admission to this department are the same as for the Department of Medicine. The studies are for—

First Year.—Chemistry, Materia Medica and Pharmacy, Physiology, Histology, Botany, Zoölogy, Veterinary Anatomy, and Forging.

Second Year.—Medical Chemistry, Physiology, Therapeutics, General Pathology and Morbid Anatomy, Veterinary Anatomy, Surgical Pathology, Internal Pathology and the Contagious Diseases, Botany, and Zoölogy.

Third Year.—Therapeutics, General Pathology and Morbid Anatomy, Surgical Pathology and Operative Surgery, Internal Pathology and the Contagious Diseases, Sanitary Police, Obstetrics, and Zoötechnics.

In the second year the student will attend clinics, and will serve as aid in the hospital; in the third year, he will be placed in charge of sick animals, and be required to prepare clinical reports and make autopsies. He will also make regular visits to breeding and dairy farms and to slaughter-houses, in order to familiarize himself with the races of animals, the economical means employed in their care, and the varieties of butcher-meat.

Examinations will be held at the close of each year and at the end of the course. All these examinations must be passed satisfactorily before the student can be registered as a candidate for the degree.

Graduation.—Upon completing satisfactorily the full course of study, the student receives the degree of Veterinary Surgeon (V.S.), upon the same conditions as those on which the degree of Doctor of Medicine is conferred.

A handsome amphitheatre and large rooms for dissection and laboratory work have been erected, and the stables requisite for hospital use will be finished and occupied before the opening of the department, in September, 1884.

THE NEW YORK POLYCLINIC.—The faculty of the New York Polyclinic, recognizing in the increased prosperity of this institution the necessity for further effort in the direction of post-graduate study for practitioners of medicine, have determined to enlarge, to some extent, the scope of their work, and to provide more commodious lecture-rooms for their classes.

To this end the management have purchased the extensive property heretofore in part occupied by the Polyclinic, which, already well adapted to purposes of

medical instruction, will be remodelled and fitted out with comfortable amphitheatres for clinical work, well-furnished laboratories for chemical, histological, and pathological studies, and rooms for operative surgery and demonstrations in surgical anatomy. Two hospital wards will be set aside for the accommodation of such typical cases of injury and disease as may be instructive to the classes and elsewhere with difficulty observed.

THE PHILADELPHIA CLINICAL SOCIETY.—The Northern Medical Association of Philadelphia reorganized at the College of Physicians on the evening of January 26th, as the Philadelphia Clinical Society. A large number of new members were enrolled, and the following officers elected for the ensuing year:

President.—Henry Beates, Jr., M.D.
First Vice-President.—E. E. Montgomery, M.D.
Second Vice-President.—Hannah T. Croasdale, M.D.
Corresponding Secretary.—J. E. Richardson, M.D.
Recording Secretary.—J. G. Heilman, M.D.
Reporting Secretary.—G. Betton Massey, M.D.
Treasurer.—L. Brewer Hall, M.D.
Censors.—A. S. Barton, M.D., S. N. Troth, M.D., Albert H. Smith, M.D., James B. Walker, M.D., and Henry Rihl, M.D.

TRAINED NURSES IN ROME.—One of the newest fields of activity for the graduates of the Bellevue Training School for Nurses, according to the *New York Tribune*, is Rome. The Rev. Dr. Nevin, Rector of the American Episcopal Church, organized the movement in response to the solicitations of travellers exposed to the insidious fevers of the Campagna, and subjected to the ignorance and inexperience of Italian nurses. His idea was that there were a sufficient number of American and English invalids in Rome and adjacent cities to give constant employment to an organized association of trained nurses. Having formed his project, he sent to the Bellevue Training School for recruits. It is very satisfactory to learn that these volunteers have succeeded admirably in their work. The agency is known as St. Paul's House for Trained Nurses, with an office at No. 16 Via Palermo, Rome. The manager, Miss Adelaide S. Martin, supplies nurses for cases of sickness anywhere in Italy. During the first ten months forty-eight applications were received and twenty-three cases treated. The number of nurses will be doubled during the present season, and there is every prospect that the association will speedily become self-supporting. A majority of the nurses employed are Americans, and their efficiency in the sick-room, their self-possession, and quiet ways are generally commended. They are doing excellent work, and are adding steadily to the reputation of the institution at home which gave them their scientific training.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending January 26, 1884, indicate that influenza, rheumatism, tonsillitis, typho-malarial fever, and cerebro-spinal meningitis have increased, and that remittent fever has decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week ending January 26, and since, at twelve places, scarlet fever at twelve places, and measles at eight places.

OBITUARY RECORD.—DR. ELISHA HARRIS, Secretary of the New York State Board of Health, died of peritonitis, in Albany, on Thursday, January 31. Dr. Harris was born in Westminister, Vt., in March, 1824. He received his medical education at the College of Physicians and Surgeons, New York City, receiving his degree in 1849. During the civil war, he took an active part in the improvement of the United States Sanitary Service, and invented a railway ambulance, which received a prize at the Paris Exposition in 1867. Dr. Harris was a large contributor to medical and sanitary literature.

NOTES AND QUERIES.

RADICAL CURE OF ARTIFICIAL ANUS.

To the Editor of THE MEDICAL NEWS.

SIR: I note, in THE MEDICAL NEWS of this date, the editorial remarks upon the subject of "The Radical Cure of Artificial Anus," in which you kindly alluded to my case published in THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, in 1867. You say that, "although the operation failed, to Dr. Kinloch belongs the credit of having been the first to practise enterectomy and enterorrhaphy for the lesion under consideration." But should not the word *failed* be qualified in some way, even if it is correct to use it in connection with my operation? To me the *success* of the operation was more gratifying than any that has before or since followed upon a surgical procedure. The operation saved my patient's life when death was regarded as most imminent. It reëstablished the track of the intestinal canal, and the natural flow of its contents; and there followed immediately such improvement in the nutrition of my patient that in a remarkably short period of time he weighed over two hundred pounds, and again pursusd his accustomed occupation in life. The "failure" then consisted merely in the fact that through the giving way of a suture a slight fistule was left, which discharged a little serous liquid up to the time when I lost sight of the man.

The suggestion for such an operation, which you say was made by "the elder Gross, thirty-seven years ago," I was not aware of at the time.

Very truly yours,

R. A. KINLOCH, M.D.

CHARLESTON, S. C., February 2, 1884.

RUPTURING THE MEMBRANES IN LABOR.

To the Editor of THE MEDICAL NEWS.

SIR: I have been engaged in the practice of medicine for twenty years, and have been a constant subscriber and reader of THE MEDICAL NEWS and THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES since 1865, and, during these years, have *read* of many ways of rupturing the amniotic membranes; but have yet to see the first case in which the "Amniotome" or any other "*tome*" was needed, save the one that God gave us—the index finger. It is plain to my mind that the membranes are ruptured early in labor for the benefit of the doctor more than the patient.

I have been, in several cases (years ago), quite anxious about the fœtus, for fear it would be "drowned in the waters." But I have yet to meet with any ill consequences from allowing the membranes to proceed entire until I could *pinch* them open with my *thumb* and *forefinger*.

Of course, this shuts out the "embellishments of the profession," especially "*Amniontomes*," and entitles me to the distinction of an "old fogy." Yet I do not believe that God ever intended, or the welfare of the patient ever demanded the rupture of the membranes until labor had so far advanced that it could be accomplished without the aid of instruments; save those that God has given us.

Respectfully,

S. E. HAMPTON, M.D.

MILTON, KENTUCKY, January 22, 1884.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—
[illegible] not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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ORIGINAL LECTURES.

ANOMALOUS DISLOCATION AT THE HIP-JOINT OCCURRING DURING PARTURITION.

A Clinical Lecture.

BY STEPHEN SMITH, A.M., M.D.,

PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY MEDICAL COLLEGE, NEW YORK.

GENTLEMEN: The subject for examination and study to-day has a twofold interest, viz.: 1. The form of dislocation of the femur at the hip-joint is anomalous. 2. The cause of the dislocation is unusual. Both of these facts will be apparent on reciting the history of the case as it has been given me, and on examining the present position and condition of the limb.

The patient is about thirty years old, mother of three children, short of stature, and strongly built. She states that when about to be confined of her second child, she called her medical attendant on the occurrence of the first pains. He expressed great desire to have her labor expedited in order to relieve him, that he might attend another case. Accordingly, he ruptured the membranes, and encouraged her to force her pains. The labor became very active, the child advanced rapidly, and during the pains he threw his whole weight upon the right thigh, which was strongly flexed upon the body, and the leg upon the thigh. The accoucheur was a large and powerful man, and, during the expulsive stage, she recollects to have suffered from the force he exerted upon the thigh in counteracting her efforts, and the extreme flexion to which the thigh was subjected.

After the labor she experienced only the usual soreness of the limbs consequent upon such muscular efforts, and she continued to do well until the fourth day, when she sat up in bed. While attempting to leave the bed on the eighth day, she was seized with violent pain in the right thigh and leg. It extended to the ankle at first, but finally became fixed in the thigh and knee.

At an early period the foot began to be everted, and the leg flexed upon the thigh. The eversion of the foot gradually increased, and the pain was so great that she had to be relieved by hypodermic injections of morphine. She could not from the first move the limb, or sit up straight in bed. She continued to be confined to her bed for three months, and several times a day received the morphine injections for the relief of her pain.

After this time she began to be removed from her bed, and made every possible effort to walk and move around her house. The most noticeable features of her case, as she describes it, after she began to walk about the house were, eversion of the foot to a right angle, a hollow on the posterior part of the hip over the joint, and a movable, hard tumor anterior to the joint.

Three years have now elapsed since the accident from which she dates her troubles. Mean time, she has been once confined, and is again far advanced in pregnancy.

We will now examine the limb carefully, and determine, as far as possible, what is the nature of the deformity. And first, we should learn as much as possible by inspection, before we attempt manipulation. As she lies on the table, the right leg appears markedly shortened; the foot is not only turned outward, but actually lies on its external margin; the patient has lost the power of inverting it. On placing her upon her feet, the deformity appears more marked. The right leg is now apparently very much shortened; the foot is naturally placed at right angles with the other, the heel of the right opposing the arch of the left. When she walks there is no change in the relations of the feet, and the difference in the length of the limbs becomes more apparent by the painful limp which is developed.

On placing her again in the recumbent position, for manipulation of the limb, we find the most marked feature of flexion to be the development of a movable tumor, just below and rather internal to the anterior superior spinous process of the ilium. On grasping this tumor, it is found to be hard, round, about the size of a small orange, and movable only when the limb is rotated. On more careful manipulation, it is perfectly evident that this mass is the head of the thigh-bone—displaced to this unusual position. Measurements can now be made to verify the diagnosis, and determine the amount of shortening. Placing the left limb as nearly as possible in the position of the right—for, as you can see, the left cannot be made to assume the same exact position—we first measure from the anterior superior spines to the tip of the internal malleoli, and find a difference in favor of the left limb of two inches and a half. There is, then, very marked shortening of the right limb, as regards its relation to the joint. But there is another measurement which we can make to determine whether the entire length of the right limb—regarding this tumor as the head of the femur—is shortened. I can just distinguish the upper extremity of the trochanter major on the right side, and taking this projection as the upper point on the two sides, I find no very perceptible difference in the length of the two limbs.

Grasping the tumor firmly when she steps, it is found that it descends markedly when she raises her foot, and then ascends as she brings her weight to bear upon the limb. In fact, when she stands upon the right leg, the tumor becomes very prominent and well defined as the head of the femur. The conclusion at which I arrive is this, viz., the patient is now suffering from an old luxation of the head of the femur from the hip-joint, the displacement being in the anomalous position under the anterior superior spine of the ilium. At that point where the curve of the ilium gives some support to the head, a new joint forms, which in time serves a very good purpose in the ordinary anomalous dislocation. New bone arches over and around the head, especially on the

upper and posterior portions, and a cup-shaped cavity results, having the appearance and functions of the original acetabulum. In this case, however, it is doubtful if any such rudimentary joint will, or indeed can form, owing to the absence of a bony surface on which the head of the bone can rest.

The question of treatment can be readily answered. Replacement is impossible in her case. No form of operation can give useful results. There is but one method of relieving her disabilities, and that is by the use of the ordinary hip-splint. The value of this splint to her would be that it would enable her to walk upright, and the weight of the body would be transferred from the leg to the splint. Locomotion would then be comparatively easy, and eventually a new joint might be formed at the lower point where the head would rest on the pubic bone.

Let us now consider briefly the more unusual features of the case. First. Could the dislocation occur from the alleged cause, viz., extreme flexion of the thigh by the accoucheur, and forcible resistance on the part of the patient? It will readily be seen that in this position of the thigh, with the degree of abduction which necessarily follows, the head of the bone is brought into a position in the acetabulum where the cavity is most shallow, and resistance to its escape is at a minimum. It does not seem improbable that during the last stage of parturition the head of the bone may have been so far forced from the socket as to have ruptured the capsule. The nearest approach to this case is that of a person who is reported to have dislocated the femur upon the pubis in the act of "striking out" while swimming. The position and forces in the two cases were not unlike, except that in the case before us there was added the pressure of the accoucheur upon the extremely flexed thigh. It is, I think, proper to assume that this dislocation did occur at the time and in the manner alleged. If this is true, another question arises, viz., Did complete dislocation occur during labor? She alleges that she had only the usual soreness and stiffness which follow labor, and it was not until she attempted to leave the bed that she was seized with severe pain. We may account for these symptoms by supposing that the head was lodged on the pubic bone just without the acetabulum, where it remained without causing any such marked symptoms as to excite attention. When, however, she began to move in the effort to get out of bed, the head of the bone was further displaced upwards and inwards, and by its pressure upon the nerves, gave rise to the severe pains which she afterward suffered. The parallel of this condition is found in the case of the man who dislocated his thigh-bone upon the pubic bone while in the act of swimming. All the inconvenience he suffered at the moment was "a catch in the right groin, which he thought was a cramp," and he was able "to walk after the accident, but with a good deal of difficulty." The position of the head of the bone is such as to lead to the classification of this dislocation among those described as "anomalous." In this form the head of the femur is usually located external to the anterior inferior spinous process, and below the superior process. It may, however, have other positions in that vicinity and still belong to the class of dislocations known as "anomalous," or by some writers as the sixth form of dislocation at the hip-joint. In this case the head is between the two spinous processes and anterior to them, and in this respect is one of the more rare forms of anomalous dislocation.

ORIGINAL ARTICLES.

A YEAR'S WORK IN OVARIOTOMY.

BY WILLIAM GOODELL, M.D.,
PROFESSOR OF CLINICAL GYNECOLOGY IN THE UNIVERSITY OF PENNSYLVANIA.

DURING the past year I have performed, as the subjoined table will show, twenty-five cases of completed ovariotomy, with seven deaths. Besides these, I had one, a patient of Dr. E. W. Watson, in which the operation was not completed. The cyst was fastened to every structure it touched, and, after the upper adhesions were severed, it was found to spring from a cancerous mass involving all of the pelvic organs. No further effort to remove it being warrantable, a drainage-tube was put in; but the patient died a few days later.

Of the twenty-five cases of completed ovariotomy, four were performed at my private hospital, with one death, which was caused by the bursting of a pelvic abscess into the bladder. Eleven were operated on in the Hospital of the University of Pennsylvania—which is a public hospital—with only one death, and that one from hospitalism. Ten were operated on at their own homes, with five deaths. Of these five fatal cases, I did not again see but one of them after the operation, and she died in eight hours, from the shock of the removal of an intraligamentous and purulent cyst.

I am always sorry not to have the subsequent management of my ovariotomy patients, but this is not always possible. Our countrywomen are very averse, not only to being operated on, but also to being operated on away from home. Hence their unwillingness to go to hospitals, and their proneness to delay matters until they have become too weak to travel. Again, three of the seven fatal cases were at the time of the operation very ill from septic fever caused by purulent cysts. In two, the cyst-walls had broken down from previous tappings, and this is another grave fault of our women, who insist on being tapped, and who put off the operation until the cyst has become very large, or has contracted adhesions. Thus, out of the twenty-five cases, there were only eight without adhesions. While my statistics do not make as good a showing as those of British ovariotomists, there is this to be said in my favor—that I have never refused to operate on a woman however slim her chance of recovery. I make this statement because, according to Sutton,[1] Billroth is the only one among European operators who "refuses to operate upon nothing that deserves the chance of life," and his success amounts to about sixty-five per cent.; whilst a very distinguished and successful British ovariotomist "does not remove very large tumors—those which weigh from sixty to sixty-five pounds, with extensive adhesions, etc."

[1] Transactions American Gynecological Society, vol. viii. p. 84.

Total Number.	Name and Residence of Previous Medical Attendant.	Age.	Condition.	No. of Children.	Previous Tappings.	Place of Operation.	Date of Operation.	Adhesions.	Ovary Diseased.	Size and Nature of Tumor.	Length of Incision.	Drainage.	Result.	Remarks.
86	Dr. Olive D. Aldrich, Philadelphia.	30	M	1	1	Home.	Jan. 4.	None.	R	15 lbs.	Short.	None.	Recovery.	
87	Dr. Joshua R. Evans, Philadelphia.	30	M			Private Hosp'l.	Jan. 6.	Pelvic, uterine, vesical.	R L	20 "	Long.	"	"	Semi-solid tumor.
88	Dr. J. Lowman, Johnstown, Pa.	46	W	3		Home.	Feb. 18.	None.	R	25 "	Short.	"	"	
89	Dr. James Graham, Philadelphia.	23	M			Univers. Hosp'l.	April 18.	Broad ligament.	L R	10 "	"	"	"	
90	Dr. G. W. Mears, Numidia, Pa.	27	S		14	"	" "	Omental.	R	3 "	"	"	"	Solid nodulous tumor; probably malignant. The tappings were for ascitic fluid.
91	Dr. G. T. Fox, Bath, Pa.	32	M	2		Home.	April 22.	"	R	10 "	"	"	"	
92	Dr. Ruel Stewart, Philadelphia.	49	W	1	1	"	April 28.	Omental and br. ligament.	R	20 "	"	"	"	
93	Dr. G. R. Robbins, Hamilton Square, N.J.	51	M	2		Private Hosp'l.	"	"	R L	15 "	"	"	Death.	Died from pelvic abscess bursting into bladder.
94	Dr. A. H. McAdam, Philadelphia.	27	W	1		Univers. Hosp'l.	May 4.	None.	R L	2 "	"	"	Recovery.	Solid tumor of right ovary; cystic of left.
95	Dr. F. C. Sheppard, Philadelphia.	54	W	6		"	May 22.	Omental, vesical, intestinal.	R	40 "	"	"	"	Spindle-celled sarcoma of ovary. Omentum also greatly thickened and hypertrophied.
96	Dr. J. W. Keath, Schaefferstown, Pa.	36	M		3	Home.	June 16.	Universal.	L R	10 "	Long.	"	Death.	Died from excessive vomiting; contents of cyst purulent.
97	Dr. D. B. Hand, Scranton, Pa.	35	M	2		"	June 30.	None.	R L	11 "	Short.	"	"	Died with obscure cerebral symptoms.
98	Dr. J. Wentz, Jeddo, Pa.	30	M	6		Univers. Hosp'l.	July 6.	Pelvic.	L	Dermoid	"	"	Recovery.	Cyst as large as an ostrich egg, full of hair.
99	Dr. I. Z. Coffmann, Phœnixville, Pa.	30	M	5		"	July 14.	Universal.	R	10 lbs.	"	"	"	Cyst contained pus, and had most formidable adhesions.
100	Dr. T. H. West, Keyser, W. Va.	27	S		1	Private Hosp'l.	Sept. 7.	None.	L R	40 "	"	"	"	Convalescence very slow; probably malignant.
101	Dr. Klepstein, Alexandria, Va.	42	M			Univers. Hosp'l.	Sept. 12.	Parietal.	L	35 "	"	Tube.	"	Drainage-tube used on account of oozing.
102	Dr. B. Reed, Atlantic City, N. J.	35	M	1	2	Home.	Sept. 14.	Universal.	R	10 "	Long.	"	Died from shock.	Intraligamentous suppurating cyst.
103	Dr. H. M. Fisher, Philadelphia.	48	M	7	1	Univers. Hosp'l.	Sept. 15.	Parietal, omental.	L	60 "	Short.	None.	Recovery.	
104	Dr. H. St. C. Ash, Philadelphia.	45	W	3		Home.	Oct. 13.	Uterine, pelvic.	R	10 "	"	"	Death.	Died from intestinal obstruction.
105	Dr. C. E. Smith, St. Paul, Minn.	35	M	2		Private Hosp'l.	Nov. 18.	None.	R L	20 "	"	"	Recovery.	Parovarian cyst on right side; ovarian on left.
106	Dr. H. Brubaker, Somerset, Pa.	29	S			Univers. Hosp'l.	Nov. 22.	"	R L	40 "	"	"	"	Parovarian cyst on right side; ovarian on left.

Total Number.	Name and Residence of Previous Medical Attendant.	Age.	Color.	Condition.	Number of Children.	Place of Operation.	Date of Operation.	Adhesions.	Organ Diseased.	Size and Nature of Tumor.	Length of Incision.	Drainage.	Result.	Remarks.
107	Dr. H. Brubaker, Somerset, Pa.	45	M	S	8	Univers. Hosp'l.	Nov. 22.	Parietal.	R I.	30 lbs.	Short.	None.	Recovery.	Necrosis of cyst from twisting of pedicle.
108	Dr. S. R. Sample, [illegible] Pa.	45	M	S.	2	Home.	Dec. 1.	Universal.	L.	[illegible]	[illegible]	Tube.	Died from shock.	Very low from septicæmia. Spray not used.
109	Dr. J. R. Umstad, Lower Providence, Pa.	31	S	[illegible]	[illegible]	"	Dec. 8.	None.	L. R	12 [illegible]	[illegible]	None.	Recovery	
112	Dr. H. W. Elmer, Bridgeton, N. J	42	S.	[illegible]	[illegible]	Univers. Hosp'l.	Dec. 10.	Parietal.	R I.	20 "	"	"	Death.	Died on fourth day from septicæmia.

The history of the fatal cases is as follows:

Case 93 was operated on at my private hospital, April 28th, in the presence of her family physician, Dr. G. R. Robbins, of Hamilton Square, N. J. The operation was not a difficult one, although the lower portion of the cyst had to be enucleated from the broad ligament. Everything went on smoothly for several days, then a pelvic abscess formed, and burst into the bladder, ending in the woman's death on the eleventh day. She was a sister to a lady from whom I had successfully removed both ovaries—viz., Case 77 of my series published a year ago in this Journal.

In Case 96 the tumor had existed and caused much suffering for six years. In the last year it gave rise to such desperate and stubborn attacks of vomiting that her physician, Dr. W. J. Keath, of Schaefferstown, Pa., despaired of her recovery. Three times, to save her life, he tapped her, removing on each occasion about twenty pounds of fluid. Until her health had wholly broken down, and she was convinced that nothing else would do, she would not listen to having the radical operation performed. I saw her for the first time on June 16th, the day of the operation, which was performed at her home in Lebanon County. My assistants were Drs. J. R. Bucher, John Bucher, and Reincehl, of Lebanon, and Dr. W. J. Keath, of Schaefferstown, Pa. The contents of the cyst were purulent, and, as far as I could make out, it was a thick-walled intraligamentous cyst of the left ovary, adherent at every point to the abdominal wall, intestines, womb, and pelvic tissues. The corresponding cornu of the womb had to be transfixed and tied for a pedicle. The right cyst was also much enlarged by a cluster of cysts containing a brown plaster-like material, and it was also adherent at every point. I did not see her again, but Dr. Keath wrote me that, directly after she had rallied, vomiting set in, and kept up until the sixth day, when she died.

Case 97, operated on at her home in Scranton, Pa., died on the ninth day from some obscure cerebral lesion. There were delirium and other head-symptoms, but no tympanitis, abdominal tenderness, or other signs of peritonitis. The operation was not a difficult one, but both ovaries were removed, and the woman was fat. I did not see her afterwards, and her physician was also called away on the fourth day, when she appeared to be doing well.

In Case 102 the tumor had been discovered a year before I saw the patient. As it developed, she suffered more and more from abdominal pains, chills, and fever, and became bedridden. After getting no better from a homœopathic treatment of several weeks' duration, she was sent to Atlantic City, where I saw her August 1st. She was bedfast from severe pain, septic fever, vomiting, night-sweats, and great prostration. Her temperature was high, and her pulse frequent. As she was not in a fit condition for the radical operation, and as she needed closer attention than I was willing to give her during my vacation, Dr. Boardman Reed kindly took charge of her, and on the 3d inst. we aspirated the cyst. The contents, amounting to about five quarts, were purulent, and their removal was followed by temporary relief from some of her symptoms. After two weeks, she was able to sit up for a few minutes, but the sac soon refilled, and the former train of symptoms started afresh. In order to get her into a fit condition for the radical operation, on September 2d I again aspirated. The fluid removed was now wholly pus. She was less relieved by this operation than by the former, and her pulse never fell below 120 beats. On September 14, aided by Drs. B. F. Baer and William L. Taylor, and by my son, I removed the cyst at her own house. As far as I could make out, it was an intraligamentous cyst—viz., one which had developed between the two layers of the broad ligament, but of this I am not sure, as all landmarks were obliterated. At any rate, the cyst was adherent and enveloped everywhere. The bladder lay in front, reaching nearly to the navel, and was so closely incorporated with the cyst-wall as to need very careful dissection. The tumor was then enucleated from its pelvic envelopes, and removed without a pedicle. A number of vessels had to be tied, but she lost very little blood. A drainage-tube was put in. She died from shock eight hours afterwards. On reviewing this case, I think that, in lieu of removing the cyst, it would perhaps have been better simply to have emptied it, and put in two drainage-tubes.

Case 104 was also operated on at home. I did not see the woman after the operation, in which I was assisted by Drs. H. St. Clair Ash, E. L. Duer, and B. F. Baer. There were very firm pelvic and uterine adhesions. By the latter the womb had been greatly lengthened out, and the vagina so stretched that the cervix uteri was effaced. The woman was extremely despondent about herself before and after the operation. On the fourth day, symptoms of intestinal obstruction set in, which could not be overcome, and from which she died on the eighth day.

Case 108 was another forlorn hope, from blood-poisoning before the operation. She was tapped by her physician on October 8th, and again on November 10th. At the latter operation, as the fluid was supposed to be ascitic, and upon its withdrawal a cyst as large as the adult head was found, a hypodermic syringe was plunged into it and fluid enough for a microscopical examination sucked out. The result was an alarming peritonitis which demanded prompt treatment. I saw her at her home for the first and last time on December 1st. She was bedfast, very weak, greatly emaciated, and unable to lie on her back. She had night-sweats and a frequent pulse. The tumor consisted of one large cyst, filled with pus and broken-down flakes of lymph, and a nearly solid portion as large as the adult head. The adhesions were absolutely universal. The bowels lay behind, matted together by thick layers of dirty lymph. Every abdominal organ was plastered over with this lymph, from which protruded many bladders or blisters of serum. Very few ligatures were needed, but a drainage-tube was put in. She died twelve hours later, either from shock, or, as her physician thought, from internal hemorrhage.

In Case 110 both ovaries were removed, and the larger one had many parietal adhesions, needing a few ligatures. The case was a promising one, yet the woman died on the fourth day from peritonitis. I believe that hospitalism was at the bottom of this result, for she was operated on in the Hospital of the University of Pennsylvania, which is a general hospital, receiving many railroad accidents. Further, her room was opposite and very near to the door of the general female ward, where several suppurating wounds were dressed daily. I relied too much on the antiseptic precautions employed, and, perhaps, also on the good record of the ovariotomies which I had performed in the same building during the eleven previous months. These were ten in number, and all of them successful. They were all operated upon in private rooms, at a distance from the wards, but under the same roof, and were kept out of the wards until all danger was passed. In this instance, however, as the distant rooms were occupied, my patient was placed in a room directly opposite to the entrance of the female surgical ward.

Out of the twenty-five cases, there were twelve of double ovariotomy, with four deaths. In all these cases the second ovary was positively diseased. Yet, with a larger experience, I am, under certain conditions, becoming more and more in favor of removing both ovaries. Whenever both ovaries are diseased, there can be no question about their extirpation; but when only one has undergone cystic or other degeneration, the removal also of the sound one may, under certain circumstances, be good policy. There always is a tendency to the subsequent degeneration of the sound ovary after the diseased one has been removed. More especially is this tendency observed in sterile women, and in those with malignant affections of the ovary. Hence many women whose lives should have been imperilled but once, have undergone the dangers of a second operation. In view of these facts, it seems to me wise to remove the sound ovary in some cases of sterility, in every case of malignant degeneration of one ovary, and in all women who either have passed the climacteric or are approaching it. I should also remove both ovaries in cases complicated with fibroid tumor of the womb. In these convictions I am further strengthened by the disappointment often expressed to me by my patients that both ovaries had not been removed, for they had a morbid dread of the remaining ovary taking on cystic degeneration.

Out of these twenty-five cases, there were only eight without adhesions, and one of these died. In four the adhesions were universal, and three died, two of them from shock. In the one that recovered, oozing from the denuded intestines was stopped by the actual cautery at a black heat. In four the adhesions were very formidable, being either uterine or vesical. Of these, one died. Case 87 had very firm uterine, vesical, and pelvic adhesions. Troublesome oozing came from the surface of the bladder and womb, which, hot water failing, was stopped by Monsel's solution applied by a sponge; the convalescence was uninterrupted. Case 95 was, as shown by microscopic examination, a spindle-celled sarcoma. Firm adhesions to omentum, bladder, and intestines needed many ligatures. The omentum was also greatly thickened and hypertrophied. The woman recovered, and is now well; but I look for an early return of the disease, for, in an analogous case, No. 65 of my published series, in which I operated February 14, 1882, the patient remained well for several months, then a tumor developed, and she died eleven months afterwards. In Cases 90 and 100, the tumors were also probably malignant. The former had been tapped fourteen times for ascitic fluid The tumor proved to be a small, solid, and nodulous growth of the ovary. It was not examined microscopically, but looked very suspicious; thus far the woman remains well.

In Case 100, the parietal and visceral peritoneum was studded with small, hard nodules, and there was much ascitic fluid. Owing to intestinal obstruction in the third week, the patient had a desperate struggle for life; but, when everything else failed, thanks to ten-drop doses of belladonna administered every two hours, the bowels were finally opened. The patient slowly convalesced, and got very well; but her physician, Dr. T. West, of Keyser, West Virginia, thinks that fluid is again collecting in the abdominal cavity, and that growths are forming at the site of each pedicle.

It is surprising what a large percentage of ovarian

tumors turn out to be malignant. The subsequent history often shows that cysts which present a perfectly innocent appearance to the eye at the time of the operation are in fact malignant. The patient recovers promptly from the operation, but dies a few months later from cancer of the pedicle, of the peritoneum, or of other organs. I have seen this happen several times. In my first case of ovariotomy, one in which the clamp was used, menstrual fluid for several months poured out from the cicatrix, which, in less than a year, became affected with cancer. Sometimes the diagnosis of malignancy can be made beforehand, but unfortunately very rarely.

From the marvellous changes often produced progressively in the epithelial lining of ovarian cysts, by which they are transformed into tufts of villous cancer, Tait inclines to the opinion that their growth is associated with a tendency to malignancy. He believes that tapping hastens this degeneration, and that after an accidental rupture of such a cyst the peritoneum will be studded with patches of papillary cancer. Hence he argues that ovarian cysts should never be tapped, and that they should be removed in the early stages of their existence before these malignant transformations have taken place.[1]

THE PREVENTION AND TREATMENT OF PUERPERAL FEVER.[2]

BY FORDYCE BARKER, M.D., LL.D.

IN the paper which we are now to discuss, the author distinctly avows his belief, without any qualification, that "puerperal fever is puerperal septicæmia," and that "it matters not whether it assume the form of metritis, phlebitis, cellulitis, peritonitis, or lymphangitis, the essence of the disorder is a poison, which is absorbed into the blood of the parturient woman through some solution of continuity." Not only the sentence quoted, but the whole tenor of the paper must convey to the unbiased mind that it is the well-defined opinion of the author that metritis, phlebitis, peritonitis, and cellulitis are never seen in the puerperal woman except as the result of an initial lesion, which permits the absorption of a specific poison through the parturient canal, either from the atmosphere—or from direct infection by doctors or nurses from neglect or carelessness—or other agents brought in contact with the sexual organs.

The tendency to this pathological view has been rapidly growing within the past few years, as a result of the enthusiastic interest excited chiefly by the important investigations of our German coworkers, who have so zealously studied the character and effects of the micro-organisms in puerperal women *in hospitals*. In several of the most recent and the most excellent systematic works on obstetrics, I have observed that nothing is said of the various local phlegmasiæ which are liable to arise in puerperal women as a consequence of parturition, and that they are only alluded to in connection with the subject of septicæmia. This seems to me a very grave omission, which must seriously embarrass young obstetricians, who consult these works for information when normal convalescence is interrupted by any of the local inflammations. No one, as yet, has maintained that the process of parturition and the puerperal state exempt a woman from those causes which induce local inflammation in the non-puerperal, or will deny that the process of parturition, and other attendant conditions besides the absorption of septic poison, may be the efficient cause of local inflammation; and I here state my conviction that in private practice, when there is no epidemic influence, twenty cases of local inflammation, due to such causes, will be met with where one will be found due to septic absorption.

It is hardly necessary to say—as I have before expressed the same opinions in a work published some years ago—that I am entirely in accord with the author in his preliminary remarks as to the peculiarities in the system of puerperal women. I suppose that all educated men now know that the blood of a pregnant woman is in a state of hyperinosis, and that, as a rule, "her nervous system is in a plus state of sensitiveness and excitability, and influences which are very controllable in the non-puerperal state produce very evil results here." But it is very evident that in certain points our opinions are wide apart. He regards certain conditions, which always are found following normal labor, and always occur in normal puerperal convalescence, as pathological, but which I believe to be purely physiological.

The ancients believed in the poisonous nature of the menstrual fluid. Pliny described the menstrual fluid as a "fatal poison—which corrupts and decomposes urine, deprives seeds of their fecundity, destroys insects, blasts the garden flowers and grasses, and causes fruits to fall from their branches."

I had supposed this superstition to be extinct, until informed by a letter from my friend, Dr. Weir Mitchell, that he knew "old men who would not permit a woman to enter their wine-room, for fear that, if menstruating, it would injure their wines." He also informed me that "in Roquefort women are not allowed in their cheese cellars." I suppose the theory must be that menstrual bacteria will destroy the bouquet of the Roquefort cheese.

But on the evening of December 6, 1883, in this Academy of Medicine, I first heard the full evolution of this doctrine clearly enunciated. The lochia are described as an offensive fluid, made up of dead and decaying animal tissues, which poisons freshly made, unprotected wounds. I quote textually two paragraphs:

"In every case of child-bearing the endometrium is thus encumbered, and freed by a process of exfoliation and sloughing; in every case the cervix, vaginal mucous membrane, perineum, and vulva, are, in varying degrees, lacerated; and in every case the offensive fluid, called lochia, poisons these freshly made, unprotected wounds."

[1] Diseases of Ovaries, p. 148.

[2] Read before the New York Academy of Medicine, February 7, 1884, at the adjourned discussion of the paper on this subject by T. Gaillard Thomas, M.D., which was read before the Academy, December 6, 1883. See THE MEDICAL NEWS, December 15, 1883.

Again, the writer says: "Here we have a number of recent wounds constantly and unavoidably bathed with a fluid made up of dead and decaying animal tissue, in a woman whose blood and nerve states are, with reference to septic disease, like flax prepared for the spark, and who is exhausted by pain, anxiety, loss of blood, and deprivation of sleep."

Other quotations might be given, of a similar tenor; and the prophylactic measures which, he asserts, "should be adopted in all midwifery cases, whether they occur in hospital or in private practice," are based mainly on this theory.

Can it be true that the process necessary for the birth of the human race is always attended with the development of a deadly poison whose malignant effects must inevitably prevent the spontaneous and kindly healing of such little traumatisms as always result from the process, and that, therefore, it is the duty of the accoucheur to take preventive measures of the character proposed? Does every parturient women, in performing the function of maternity, like the scorpion, that carries in its tail an agent for suicide, if death is threatened by fire, physiologically generate an equally fatal poison in a corresponding locality, which the obstetrician must guard against by means that are most inconvenient, alarming, and not altogether free from danger?

I do not intend now to examine the question, which I have before discussed very thoroughly, and my views have long been published, whether there is not a distinct disease, most appropriately denominated puerperal fever, when, if there be any septicæmia, it must be a consequence of a primary disease, and not a cause. Nearly a hundred years ago the eminent obstetrician of London who succeeded Denman, Dr. John Clarke, wrote as follows in regard to puerperal fever: "Unfortunately, the uniformity of the disease was assumed, and each author erected his own experience into a standard, by which to judge of the descriptions and the practice of others." This observation, which I read early in my professional life, made a strong impression on mind. I trust that it will not be deemed egotistical if I say that it had great influence on my mind during the twenty-five years that I was engaged in teaching medical students, as I felt strongly the responsibility of the position, and that I should be culpably negligent in my duty if I simply gave the results of my own observations, or the opinions of a limited number of observers, or the theories of a few popular authorities, but that I was bound to give the sum of the knowledge which had become a part of the common stock of the profession. For reasons which will be obvious, I felt this more strongly in regard to puerperal fever than any other subject which I had to discuss either before medical students or in medical societies. More has been written on this than on any one disease. It has been a terribly fatal disease in lying-in hospitals in all the great cities where such hospitals are found. It has been fatal as an epidemic in rural districts, where, within a certain area, every woman in a sparsely settled population, who gives birth to a child, for a certain limited period is affected, and a large proportion die. I could refer to very many published reports of such epidemics which have occurred in villages and towns, where for twenty-five or thirty years previous not a single death had occurred in childbirth except from the casualties of labor, such as rupture of the uterus, hemorrhage, and convulsions.

All we know of any disease is derived from the study of its etiology, its clinical phenomena, and its anatomical lesions. The epidemic disease to which I have just referred differs in all characteristic points from what is known as septicæmia. It differs in its origin, its modes of attack, its symptoms, and its anatomical lesions. The symptoms are frequently manifested a day or two before or even during labor, even when the child is subsequently born alive. In septicæmia the symptoms are never observed before or during labor, except when the fœtus is putrid. The former disease, puerperal fever, originates from epidemic causes, and from contagion and infection. The latter, from nosocomial malaria, from autogenetic infection, and from direct inoculation. Can a woman after childbirth be exposed to the danger of receiving the poison which produces septicæmia in larger doses than when she has retained in her uterus a portion of putrid, decomposed placenta? Yet I do not believe there is a single person who has had considerable obstetric practice for twenty years who has not had more than once to remove portions of putrid placenta which has been retained for days, and the patient has had no disturbance of such severity that he would call it puerperal fever. In the *Texas Courier-Record of Medicine*, December, 1883, Dr. H. C. Ghent, of Belton, Texas, gives an amusing report of a case to which he was called three days after labor. She was attended during labor by an ignoramus, who appears to have used considerable force, and probably made some efforts to extract the after-birth. The patient, before he left, called his attention to something like a cord protruding from the vagina, which he said would, perhaps, come away by piecemeal. On his visit the next day, he at first said that the protrusion from the vagina was a false conception, but afterwards pronounced it a falling of the womb, which, after a considerable length of time, he succeeded in replacing, and had the anxious husband engaged for twelve hours in constructing an abdominal supporter. On the third day, Dr. Ghent removed a large portion of the placenta and membranes, a putrid mass, with a stench which "was about as much as an ordinary pair of olfactory nerves could well bear." The patient had a quick pulse and high temperature, but the constitutional disturbance was easily allayed, as it seems that a "few thorough washings with hot carbolized water" were all the treatment required.

Before leaving this part of the subject now under discussion, I shall briefly allude to one other point, which strikingly illustrates the difference between puerperal fever and septicæmia. I think there can be no doubt that the majority of the profession believe that all those causes of nosocomial malaria, such as aggregation, bad ventilation, contact with

septic material, etc., which have a tendency to induce septicæmia in surgical cases, have an equal tendency to develop the disease known as puerperal fever in women recently confined. But this does not prove that the diseases are identical, for I think there is abundant evidence that, while these causes are always requisite for the development of surgical septicæmia, puerperal fever may be very epidemic when these causes are wholly wanting.[1]

In the early months of 1873, puerperal fever prevailed in the best parts of the city, and in that class of society possessed of abundant means and living under as good sanitary conditions as are possible in any large city, to a degree and extent here unknown for the previous twenty-five years. The deaths from this disease in the hospitals, and in the wards of the city where the poor are aggregated, were much less than in many former years. In five of the best wards of the city, in which are the residences of a great proportion of those of wealth, and few of the class of dwellings known as tenement-houses, with a population of 307,046, there were 80 deaths from puerperal fever, while in the remaining wards of the city, with a population of 605,245, there were but 63 deaths. In other words, I may say that during this period, in those wards of the city where the causes of septicæmia must have existed in the greatest abundance, the mortality was nearly one-third less from puerperal fever, in proportion to the population, than in the best parts of the city, where these causes of septicæmia could have existed only in a very limited degree.

I have good cause to remember this epidemic, as the excessive work, mental strain, and loss of sleep which it brought upon me, as my medical friends know, affected my health to a degree that required nearly six years for perfect recovery. I saw ninety-five cases of this epidemic, of which there were nineteen deaths. Most of the latter I believe to have been fatal in their character from the history which I received, and I only saw them once. I had three cases in my private practice, one of which died. After this, most of the ladies whom I had engaged to attend, by my advice, went out of town for their confinement, and all these had normal convalescence.

From all these considerations, I think that if all the knowledge of this disease be derived from authors who have studied it in hospitals exclusively, it will be limited and one-sided, and the deductions, both as to its pathology and treatment, must in many instances be erroneous and unsafe. Especially must this be the case with those whose well-deserved eminence as operators compels them to be brought in frequent contact with surgical septicæmia, and to witness the terrible results which this produces after the most skilful performance of such operations as laparotomy and ovariotomy. Indeed, one can hardly understand how such a surgeon, who accepts the theory and believes in the necessity of such a prophylaxis and such treatment as are insisted upon in the paper under discussion, would ever dare to enter the room of a puerperal woman.

There are many other details in this connection which I am tempted to discuss, but these will doubtless receive due attention from the speakers who will follow me. I shall, therefore, content myself by expressing an opinion which will surprise many who have been carried along by the popular wave of the septic theory as the initial cause of most of the puerperal diseases. My conviction is strong, based partly on individual experience, but chiefly on a careful study of the clinical midwifery reports of private practice and all the literature of the subject in my possession—and this is very full as regards the English and French languages—that, outside of hospitals, less than two per cent. of the puerperal diseases, and not half of one per cent. of the deaths after childbirth, are due to septicæmia. There are no statistics of private practice which demonstrate the error of this opinion. The belief of the septicæmists that terrible dangers threaten every woman in childbirth is based wholly on theory. Because the maternal system has certain peculiarities differing from its normal condition—because the lochia is a poisonous fluid—and because there is always a certain amount of traumatic lesion in the parturient canal following parturition, every childbearing woman incurs a most hazardous risk. This is a blunt statement of the argument and its deductions.

I do not care to summon in support of the opinion that I have just expressed any higher authority, even if it were possible to do so, than the writer of the paper which we are now discussing, and from which I make the following quotations:

"And yet what are the usual results? Recovery, uniformly, I might say universally, unless some unusual occurrence manifests itself to prevent this happy consummation. Theorizing about the matter, one would suppose that the mortality resulting from such a state of things must be excessive." . . .

"And yet the facts are these: only about one or two in every one hundred parturient women ordinarily die when properly cared for during labor, even in public hospitals."

Now, if we recall the fact that a large proportion of deaths from childbirth result from the casualties of labor, such as convulsions, rupture of uterus, hemorrhage from placenta prævia, nervous shock, etc., it will be seen that the belief which I have expressed differs but slightly, if any, from his. I certainly find it much more agreeable to refer to our points of agreement than our points of difference.

The limit of time which, in justice to others who follow, I have allowed myself will permit but a very few remarks on "the prophylactic measures which should be adopted in all midwifery cases, whether they occur in hospital or in private practice," as the author of the paper distinctly avows. If "she who is about to bring forth" must "be treated as one about to go through the perils of a capital operation;" if all those preparations, so definitely enumerated, which gynecological surgeons insist upon previous to an ovariotomy or a laparotomy, are

[1] See Puerperal Diseases, by Fordyce Barker, M.D., Appendix, page 515.

necessary in ordinary labors; if the danger from childbearing be so great that a wise and prudent obstetrician is justified in subjecting his patient to the hazardous depression of intense anxiety and fearful doubt as to results, and in surrounding her with the vivid apprehension of her family, instead of stimulating and cheering her with the great happiness of maternity and the hope of increased interest and love from her husband; if all or even a considerable part of the details mentioned are necessary "to save thousands of lives which are now lost," and to spare "thousands of desolate households the sorrow of losing their female heads"—then it seems to me evident that the State should make childbearing a penal offence for all those families who do not have a sufficient annual income to make it possible to carry out all these requirements. Such a law could only be made effective by adopting the facetious suggestion which appeared in the *Medical Record* of January 19th, over the signature of Seth Hill, Stepney, Conn., making it compulsory for all women unable to carry out these requirements "to wear an antiseptic pad over the vulva from the inception of the catamenia until the menopause, to be non-removable without strict antiseptic precautions under the carbolic spray;" and, to secure this pad, it would be necessary that some State official should apply the lock, which, no doubt, many present have seen in the Museum de l'Hotel de Cluny, said to have been used by the noblemen of France to prevent their wives from falling during their absence in the Crusades.

The description given of puerperal fever, true as it may be, in its outlines, of the septicæmia which gynecological surgeons are so often forced to encounter, I think, will strike obstetricians familiar with the disease in the lying-in chamber as the ideal picture of a poet, differing as much from the scientific description of trained clinical observation as the pictures of natural scenery by a Byron or a George Sand would differ from a scientific description of a mountain or a lake by Humboldt.

As to diagnosis, I cannot regard the symptoms mentioned, even in their totality, as pathognomonic of septicæmia, as all of them are to be found in other puerperal affections, when there is no evidence of septic absorption, unless with the author it be assumed that all puerperal disturbances are due to this cause alone. It is made an important point by the author to determine whether "the septic disease which is developing has originated in wounds situated between the os internum uteri and the vulva, or in the endometrium, above the former point." He says that "usually the question has to be decided by the efficacy or inefficacy of frequent germicide vaginal injections in bringing down the temperature and controlling other grave symptoms."

Now, I look at this subject from an entirely different point of view, and, as I have not the time to examine in detail the treatment inculcated in the paper we are now discussing, I must be content with the expression of my convictions by a few general propositions.

In puerperal fever, as met in private practice, we have to treat the *consequences* of some form of blood-poisoning. This may or may not be septic poisoning. In private practice, I think it generally due to some occult, possibly atmospheric, epidemic influence; in hospital patients, nosocomial malaria, often associated with septic poisoning.

No treatment which interrupts the normal physiological processes — such as the retrograde metamorphosis of involution, the fatty transformation of the component fibres of the uterus, or the cicatrization of its internal surface by the exudation of organizable lymph, and the development of a new layer of mucous membrane, or the healing of traumatic lesions—can be justified, unless positive symptoms, now well understood in science, demonstrate their necessity.

Antiseptic injections, both vaginal and intrauterine, are of great service when the indications for their use are clearly shown by local signs or general symptoms, but they cannot be recommended with safety as a routine practice on theoretical grounds, as, for obvious reasons, they may be most detrimental in retarding the cicatrization of lesions and the other processes of normal convalescence, and are otherwise sometimes dangerous. In several cases which I have seen with others, where antiseptic injections, both vaginal and intrauterine, had been used with all the care and precautions inculcated by the author and kept up for several days, the temperature rapidly fell, the profuse and sometimes offensive vaginal discharges speedily diminished, the pulse and general condition manifestly improved after the injections were discontinued.

I shall only add a few words in regard to refrigeration as a means of reducing fever in puerperal diseases. I have no question that it may be useful in some cases, but my own experience in this method of treatment has not been favorable. Many years ago I tried it in several cases in Bellevue Hospital, but I soon gave it up, as the results were less satisfactory than where other plans of treatment were pursued, and I know that this was the conviction of my house-staff. Cold will effectively and usefully reduce the temperature in active inflammations and acute fevers, but in adynamic diseases and in hectic fever this must be attended with a rapid waste of tissue more dangerous than the pyrexia. In three cases which I have seen with others—two a year ago and one this winter—where the coil had been assiduously kept over the abdomen, most of the time two or three days, the conditions in each were remarkably similar. The abdomen was blanched, colorless, and not sensitive to pressure; the patients all avowed that the coil gave them great comfort, but the temperature was very high in all—in one 104.3°, and in the other two over 105°; the pulse was very rapid and feeble, the heart's action extremely weak, with pulmonary symptoms—such as short, rapid, and shallow respiration—which caused grave apprehension that there might be latent centric pneumonia. After some discussion, I induced my friends to remove the refrigerating coil, and, in its place, to cover the abdomen with flannel saturated with the oil of turpentine, for the purpose of stimulating vaso-motor action, restoring the capil-

lary and equalizing the general circulation. All were taking quinine in large doses. This was greatly diminished or wholly stopped, and digitalis and ammonia in full dose were substituted. In a few hours the change in each of these cases was most remarkable; the temperature was reduced from two to three degrees, the pulse was greatly lessened in frequency and increased in force, and all pulmonary symptoms, which had caused so much anxiety, had disappeared. Two of these cases recovered and are still living. The third, who had also been treated by antiseptic vaginal and uterine injections, was apparently convalescent, when suddenly she became much worse; collapse supervened, which was found to be due to a sudden development of diphtheritic membranes, which covered the mucous surface of the vulva and vagina, the result of carelessness and dirtiness of the nurse. The patient died in a few hours.

I now ask permission to refer to a matter outside of the question of the prevention and treatment of puerperal fever, but in behalf of the "truth of history." I ask any who may feel sufficient interest, to turn to page 320 of my work on the *Puerperal Diseases*, where they will find on that and the following pages the subject of intrauterine injections fully discussed. Instruments for this use, which had been devised more than fifteen years ago, were shown to the class, and explicit directions were given as to the methods and indications for these injections, differing in no essentials from those we heard in this hall on the 6th of December. The lecture was delivered in the amphitheatre of Bellevue Hospital, in February, 1869, and the work in which it was printed was published in January, 1874. Then it may interest some to look at page 85 of Volume IV. of the *Transactions of the American Gynecological Society*, and read the papers by Dr. Edward W. Jenks, of Chicago, and Dr. James R. Chadwick, of Boston, on intrauterine injections, and the discussion which followed.

In conclusion, I shall only add that my creed today is fully avowed on page 476 of the book to which I have before referred, and, unless in the future I learn new facts and new arguments to change my faith, I shall "die impenitent."

A CASE OF MISTAKEN SEX.

By WM. P. McGUIRE, M.D.,
OF WINCHESTER, VIRGINIA.

A. B., thirty-five years of age and in good circumstances in life, consulted me on January 12, 1884, in order to have the sex to which she belonged determined. She was to all outside appearances a fairly formed woman about five feet four inches in height, with long hair curling down her back. Her voice and features were effeminate, and her demeanor was modest. From birth her dress had been that of a woman. All of her associations had been with women, and her business in life that usually followed by that sex. There was no hair upon her face.

I found upon examination that the conformation of her thorax was similar to that of a woman, and that her breasts were developed similarly to those of a young girl. The nipple was erectile. Her arms, hands, and lower limbs were like those of a man. There was a small penis in the natural position about three-quarters of an inch in length, with a well-formed glans and prepuce. It was capable of erection, but had in the glans no aperture. Following from the base of the penis backwards was a sulcus about one-half an inch in depth and two and a half inches in length. Lying upon each side of this sulcus, and each enclosed in separate scrotums, were two well-formed and developed testicles, each attached to a moderate sized spermatic cord, the whole conformation resembling the vulva of the female. There was no opening in this sulcus, but just at its posterior termination was an opening one-quarter of an inch in diameter, which was the external opening of the urethra, extending backwards and upwards into the bladder. No prostate gland was found. She stated that all of her proclivities and desires had been masculine, and admitted that occasionally in her sleep she had pleasurable sensations followed by an ejaculation of a white fluid from the opening of the urethra, which was, of course, an ejaculation of semen. There was no trouble in determining her sex. She was advised to change her dress to that of a man, and to attempt to have by a plastic operation a new urethra made from its termination in the perineum, along the sulcus to the glans penis, in order to effect more convenient urination, as she is now obliged to do so in the sitting posture.

ABSCESS OF THE TONSIL IN AN OCTOGENARIAN.

By SOLOMON SOLIS-COHEN, A.M., M.D.,
DEMONSTRATOR OF PATHOLOGY AND MICROSCOPY IN THE PHILADELPHIA POLYCLINIC.

Of one thousand consecutive cases of acute tonsillitis observed by Morell Mackenzie[1] at the London Hospital for Diseases of the Throat, but nine occurred in patients over fifty years of age, and in no instance was the patient older than sixty.

The following case is, therefore, worthy of record if only as a rarity; but by that very rarity it acquires a special diagnostic importance.

June 7, 1883, Mrs. V., aged eighty, was brought by her grandson to the office of Dr. J. Solis-Cohen, in whose absence the patient was examined by me. The lady was of sound faculties, and her bodily vigor was fairly well preserved. She had long suffered with dyspepsia and with chronic bronchitis, for which she occasionally consulted a practitioner of a "pathy," and four weeks previous to the time I saw her, this gentleman had been summoned to treat her for what he called "diphtheria." Two weeks later a quantity of blood and pus escaped from her mouth, and from that time the discharge had continued more or less copiously. There was occasional hacking cough, and degluti-

[1] Diseases of the Throat and Nose, vol. i. p. 49, London, 1880.

tion was painful., Her grandson became alarmed, and insisted that a physician should be consulted. He stated that he had looked into her throat, and had observed what he supposed to be a large tumor springing from her right tonsil. Inspection of the throat showed considerable tumefaction of the anterior palatine fold of the right side and enlargement of the corresponding tonsil, these structures being of a dark red, almost livid, hue. The middle portion of the tonsil was occupied by an irregular excavation of considerable depth, having ragged edges, and surmounted by a projection, irregularly spheroidal in shape, about the size of a filbert-kernel, and somewhat lighter in color than the surrounding tissues. The bed of the excavation was fungated, but there was no discharge nor covering of pus. From the history I concluded that the case had been one of acute tonsillitis, proceeding to suppuration; as a consequence of which the tonsil was left in the condition described. An application of the compound solution of iodine was made to the parts, and the patient was directed to return next day for the purpose of further examination by the gentleman whom it had been intended to consult. On this examination the diagnosis was confirmed, and the local treatment continued. In addition, there was ordered for internal administration, the solution of potassium arsenite, three minims to be taken in a teaspoonful of compound tincture of gentian, thrice daily, after meals. The patient was permitted to take her customary summering at the seashore, reporting for supervision at the end of a week, and again after a fortnight; one reason for thus keeping the case under observation being the diagnostic importance of positive exclusion of epithelioma,[1] which latter might justly have been suspected from the age of the patient, the appearance of the parts, and the unilateral manifestation. The sex of the patient did not favor this view; but the absence of cachexia and of glandular enlargements need not have militated against it, presuming the tonsil to be the seat of a primary epithelioma. It is true that this condition is rare, but tonsillitis in one so advanced in years is a still more unusual occurrence.

On July 16th the patient was finally discharged, the parts having remained for two weeks in a normal condition. During November, I was informed that this healthy condition had been continuous.

MEDICAL PROGRESS.

Phosphate of Codeia.—Dr. Fronmueller employs the phosphate of codeia for hypodermatic injection. He says (*Memorabilien*, July 16, 1883) that it possesses the advantage over the muriate and sulphate of being much more soluble. The substance crystallizes in slender, four-sided columns, is white in color and of a bitterish taste, and is soluble in four parts of water. Its action is very like that of morphia, but it is milder, and the symptoms of poisoning (such as great weakness, intense headache, bilious vomiting, etc.) are much less often encountered. It seldom causes local irritation when subcutaneously injected. The dose should be at least double that of morphia. The phosphate of codeia is especially recommended in the case of women and children.—*Practitioner*, January, 1884.

Vaginal Extirpation of the Uterus.—Breisky reports a case of total extirpation of the uterus by the vaginal method, on account of carcinoma, in a woman, æt. 60 years. The patient recovered, though it remains to be seen whether the malignant growth will recur.—*Centralbl. für Gynäk.*, January 5, 1884.

Parasite in the Onion.—M. Joannes Chatin has recently discovered a helminth in the common onion (*Allium cepa*), which has given rise to a disease. Pasteur has carefully studied the parasite, and found it similar to the parasite of mildew in wheat, but with less vitality. The best means for destroying it is to pull up the affected plants and burn them.—*Revue Scientifique*, January 5, 1884.

Reactions of Starchy Matters.—At the meeting of the Société de Biologie, on December 8, 1883, M. Dastre reported the results of his experiments on the reactions of starchy matters (starch, glycogen, and dextrine). The procedure which he proposes is founded on the fact that chloroform has the property of removing iodine from water. If we attempt to decolorize a solution of iodide of starch, we fail; we succeed, however, with pure glycogen; iodide of glycogen (an expression which Dastre employs for convenience of language) has a much weaker retaining power for iodine than has iodide of starch, and it is decolorized by chloroform.—*Gazette Hebdom.*, December 14, 1883.

Porro Operation.—H. Fehling reports his fourth Porro operation, which was successful both for mother and child. The patient was thirty-three years old, and the operation was performed on account of osteomalacia. —*Centralbl. f. Gynäk.*, January 12, 1884.

Treatment of Aneurisms of the Aorta.—In his inaugural dissertation, Dr. Lacointre gives the results of his observations on this subject, and draws the following conclusion:

Iodide of potassium is a sure means of calming the cough, dyspnœa, dysphagia, and the symptoms of compression due to aneurism of the aorta. It often produces a regression and atrophy of the aneurismal tumor, and seems also to give a greater prolongation of life than any other treatment. In a majority of cases it is well borne by the patients, and is quite innocuous.—*Revue de Thérap.*, January 15, 1884.

Hypodermatic Injections.—M. Luton divides hypodermatic injections into two great classes, according as it is necessary to make them in an alkaline or an acid medium. The alkaline medium—that existing in the subcutaneous cellular tissue—is the proper place for injecting neutral salts; the acid medium found in the muscular tissue is very favorable for the absorption of acid, alkaloidal, and certain metallic salts. The salts of mercury, for example, are absorbed with difficulty by the subcutaneous cellular tissue, and are liable to cause local inflammation; but when injected into the muscular

[1] This ossibility dictated the arsenic treatment.

tissue the absorption is complete, and local accidents rarely occur.—*Revue Scientifique*, January 3, 1884.

Nitrite of Amyl in Pneumonia.—Prof. Silvestrini, of Parma, formulates his conclusions as to the value of nitrite of amyl in pneumonia as follows:

1. In the preorganic stage of pneumonia, the nitrite of amyl may be of prompt and effective service.

2. One may repeat with impunity the inhalation of this remedy during several successive days, and in doses relatively enormous. (He has administered as much as fifty grammes of the nitrite in five days, the inhalation being carried on for five minutes every half hour.)

3. In cases which have a fatal issue, whether from extension of the pneumonia, or from complications, these inhalations may retard death.

In the brief note of his experience with the nitrite four cases are recorded. In the case of a man, fifty-nine years of age, suffering from double pneumonia, which had reached its fifteenth day, the nitrite was commenced under the following conditions: Pulse very small, 120; respirations superficial, 44; temperature, 101.5°; stupor, cyanosis of the face and extremities, coldness of the point of the nose, and tracheal râle indicating the approach of a fatal termination. At the end of five minutes, during which twenty drops of the nitrite of amyl were administered, the stupor appeared less, but the other phenomena persisted. The inhalations were repeated during the night, about ten grammes being thus given. In the morning pulse 120, respiration 64, temperature 101.3°, with less cyanosis, and signs of commencing resolution. With progressive improvement two days later the pulse was 96, respiration 36, and temperature 100°, and in a few days the patient was convalescent.—*Glasgow Med. Journ.*, January, 1884.

Ulcerous Typhoid Sore Throat.—Dr. E. Rapin, in a communication on this subject to the Société Médicale of Geneva, draws the following conclusions:

1. Typhoid fever affects the throat more often than is generally supposed; in fact, the first symptom may be a sore throat of an ulcerous nature.

2. The ulcerations are superficial, rounded, or, more usually, oval, with a slightly elevated border, hard floor, ordinarily indolent, and generally situated on the anterior pillars of the fauces, and on their anterior face.

3. Their diagnosis is sometimes very difficult; it is only by frequent examination and attention to the general symptoms that they can be certainly recognized. These ulcers seem specially to affect the lymphatic system; the lesions of the lymphatic apparatus are identical with those found elsewhere in the course of typhoid fever.

4. Their development is due to the direct penetration of the typhoid germs into the follicles of the faucial region.—*Revue de Thérap.*, January 15, 1884.

Arsenic as an Antipyretic and Parasiticide in Relapsing Fever.—Bogolomow reports four cases of relapsing fever treated with Fowler's solution. The first was that of a man, æt. 36. Treatment was commenced on February 14, 1883. The morning temperature was 103° Fah., evening temperature 105°. The spleen and liver were enlarged; there were petechiæ under the skin, and numerous spirochætæ were found. On Feb. 15, the morning temperature was 103°, evening temperature 104°. Gtt. iv of Fowler's solution were injected under the skin; five hours afterwards, the temperature sank to 92.5°, and the pulse from 100 to 60. On the following day, the temperature was still 92.5°, and no micro-organisms could be found.

On the twelfth day after the beginning of the attack, the temperature rose suddenly to 104.8°, and large numbers of the micro-organisms were found in the blood. The solution was again injected, and with the same result as before. The effect on two of the other three patients was equally good. The temperature and pulse rates were promptly reduced, and the micro-organisms disappeared from the blood.—*Centralbl. für klin. Med.*, December 29, 1883.

Modifications in Muscular Structure after Nerve-section.—M. Babinsky has recently presented a communication on this subject to the Académie des Sciences. These modifications consist essentially of simple atrophy of the contractile substance with multiplication of the sarcolemma cells. Babinsky shows that atrophy of the contractile substance progresses in direct proportion to the development of the protoplasmic structure; this dissociates the primitive cylinders, and thus brings out the field of Cohnheim much more distinctly than in the normal state; it accumulates in certain fasciæ, at their periphery and between the sarcolemma and the striated substance, in other fasciæ at their central part, so that the striated substance is turned back toward the sarcolemma. This last disposition is particularly interesting, because the altered muscular fibres are exactly similar to muscular fibres in process of development.—*Revue Scientifique*, January 12, 1884.

Antagonism of Pilocarpine and Ergotine.—M. Rabuteau reported at a late meeting of the Société de Biologie that there is an antagonism between pilocarpine and ergotine, the first substance acting as a vasodilator poison, the second as an excitant of the unstriped muscular fibres.—*Gazette Hebdom.*, December 14, 1883.

Pilocarpine in Scarlet Fever.—Mr. Frank Shearar reports a severe case of scarlet fever, with convulsions, treated successfully by subcutaneous injection of pilocarpine, gr. $\frac{1}{15}$. Soon the skin became moist, and in from ten to fifteen minutes the patient was salivating, and was bathed in a profuse perspiration, great beads of sweat standing on the face, and, in the course of fifteen minutes after the injection, and an hour and twenty-five minutes from their first appearance, the fits ceased and never recurred. Therapeutically considered, it is very interesting to find that when venesection to a very fair amount had failed, the pilocarpine first showed its marked physiological effects, and then stopped the fits, and that after such a lapse of time as quite to put it beyond all reasonable doubt that the venesection had very little to do with the successful result. Indirectly, perhaps, it aided it, as did also the application of the hot pack, which was kept up very industriously; yet both of these methods of treatment were in operation for upwards of one hour and a half without in the least modifying the fits.—*Glasgow Med. Journ.*, January, 1884.

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THE DISCUSSION UPON PUERPERAL SEPTICÆMIA.

OUR present number has the conclusion of the discussion at the New York Academy of Medicine of Dr. Thomas's paper upon "The Prevention and Treatment of Puerperal Septicæmia."

Dr. Thomas, believing in a specific poison as the cause of so-called puerperal fever, proposed ten rules which he stated ought to be carried out in every case of confinement, for the purpose of preventing the disease. Some of them are wise and practicable, but others seem to us utterly useless. For example, what is the necessity of giving every four hours antiseptic vaginal injections to a woman in labor when there is as yet no traumatic surface—vulval, vaginal, cervico-uterine, or intra-uterine; and when there is ordinarily such abundant secretion from the birth-canal that absorption is in the highest degree improbable, if not impossible? Again, the suppository of iodoform (three to five grains, with cocoa butter) which, after labor, is to be passed up under the os uteri every two or three hours, may open the vulvo-vaginal door for the entrance of more disease-germs from the atmosphere than the iodoform can kill. Every eight hours the patient has a warm antiseptic vaginal injection. Finally, an antiseptic catheter is to be antiseptically used, if the instrument be necessary—and the necessity will be apt to come to a patient who has such luxury of attentions as are directed. Whence it will be seen that the patient's genital organs are more or less disturbed fourteen to eighteen times in the twenty-four hours. We must believe that physical and mental rest has as much to do in helping puerperal convalescence as microbes have in causing puerperal disease.

In reading Dr. Thomas's elaborate directions, the passage in *Rasselas* comes to mind, "Thou hast convinced me it is impossible to be a poet;" and, similarly, each woman to whom these ten commandments are read and expounded, would be apt to think, if not to say, "Thou hast convinced me it is impossible to have a baby and live." We do not believe one physician in a hundred will endeavor to secure the observance of all these rules; the prophylaxis of puerperal septicæmia—and this prophylaxis is of great importance—ought to be simpler, less complicated, less perturbing and disturbing Nature's processes. Intensely earnest, thoroughly honest, and gifted with rare oratorical power, as Dr. Thomas is, we do not wonder that so many of the Fellows of the Academy heartily indorsed his utterances, but only that any one dared to controvert them.

Dr. Thomas, in his brief reference to the outbreak of puerperal septicæmia, speaks of the disease beginning with a chill. Now, this statement may mislead some who have never seen the disease, and therefore we beg leave to remind them that in some cases a fatal lymphangitis, metritis, or peritonitis, or a general septic poisoning, without distinct localization, at least discovered during life, may occur, and Nature give no cry of alarm by a chill preceding the symptomatic fever.

In the treatment of the affection, Dr. Thomas advises hypodermatic morphia, antiseptic intra-uterine injection, reduction of temperature by the use of ice-water in Townsend's coil and by quinine, or by Warburg's tincture (a preparation which will generally be found disagreeable to patients, and which, considering the multiplicity of its ingredients, is hardly worthy of scientific recognition), and support by milk and animal broth. Probably the antiseptic intra-uterine injections are the most important part of this treatment. Dr. Thomas has not said a word too much in their favor, but it is to be remembered that Dr. Barker has also warmly advocated them, as may be seen by consulting his very valuable work on *Puerperal Diseases*, and the fourth volume of the *Transactions of the American Gynecological Society*.

The discussion was opened by Dr. Barker, who endeavored to overthrow the septicæmic theory, presented by Dr. Thomas, as well as criticised somewhat the treatment he advocated. Dr. Barker is well known as possibly the ablest of all advocates of the essential nature of puerperal fever; he presents the argument strongly, but chiefly as the result of his own observation, not bringing to bear, or at least only slightly, the large historical resources he has at such ready command, nor fortifying any of his positions by the authority of great teachers: yet

one might find in the writings of the veteran obstetrician of Strassburg, Stoltz, some facts and opinions that are not easily, or at all, reconcilable with some of the positions of Dr. Thomas; similar facts and opinions may also be found in a recent paper by Eustache in the *Archives de Tocologie*. We almost wish these had been presented, so that we might have the answer of Dr. Barker's chief antagonist.

After Dr. Barker's paper had been read, and he had supplemented it by some extemporaneous remarks, several Fellows participitated in the discussion, which was afterward closed by Dr. Thomas. In this closing speech the brilliant orator seems to us to have been somewhat discursive; the speech appears even weak in its beginning, but strong and clear in its progress, some passages, indeed, rising to the noblest eloquence, and powerful in its conclusion. A few hard blows were given, but they were given with knightly courtesy and without malice. In the course of this speech the brilliant orator, taking the statement that had been made by Dr. Hanks, to the effect that upward of two hundred and fifty women died every year in New York from puerperal septicæmia, concluded that ten thousand died from this cause every year in the United States, a conclusion which is in a high degree improbable, for the disease is much more frequently seen in large cities, and especially in lying-in hospitals, than in the country.

In the essential positions taken by Dr. Thomas in this speech, he is sustained by leading obstetric authorities; this remark especially applies to his assertion that puerperal septicæmia is dependent upon micro-organisms. Incidentally, we may observe that we wish Dr. Thomas, or some one holding his faith, had quoted in the discussion some of the evidence in favor of antiseptic obstetrics which Dr. Paul Bois has collected in his *Methodes Antiseptiques en Obstetriques*, Paris, 1883. Admitting that a specific poison is the cause of puerperal septicæmia, such obstetrics has a scientific formation; while, on the other hand, the most remarkable results from the use of antiseptics in obstetric practice come to confirm the theory—*cura ostendit morbum*.

This discussion was most able in character, and it will have a wide-reaching and lasting influence. Whether or not all believe with Pajot that the term puerperal fever ought to be consigned to the museum of antiquities, certainly all will be quickened to see that labor and the puerperal state shall be rendered as far as possible aseptic. While we do not accept, as before indicated, all of Dr. Thomas's rules, others are of great importance, and on occasion should be urged upon the profession. And we wish he had supplemented them by an earnest protest against the interference with physiological labor by digital or manual dilatation—the meddlesome midwifery, which is practised by some, we hope a very small minority of, doctors. It would be much safer for the patients, and their liability to septicæmia would be less, if these practitioners were to keep their hands in their own pockets during the whole course of labor, instead of using them as dilators of the uterine or vaginal orifice.

Proposing at an early day to consider the subject of puerperal septicæmia, we now take leave of the New York discussion.

OGSTON'S OPERATION FOR FLAT-FOOT.

AT the meeting of the Medical Society of London, January 14th, PROF. OGSTON, of Aberdeen, read a paper on the mechanism of pes planus, and its treatment by a new operation, which may be found in the *Lancet* for January 26th. The key to the disease is constituted by the relaxation of the ligaments, and the changes in the scaphoid bone and head of the astragalus, which form the inner half of the medio-tarsal or Chopart's articulation. On the under surface of the joint the bones are separated from one another, while the pressure between them is increased on the upper side. Hence, the mutual relations of the articular facets are changed; growth is checked, or absorption takes place, at the upper halves; and there is increased growth of the separated surfaces of the lower halves, which takes place mainly in the astragalus, its head being somewhat square in form and presenting an abnormal ridge or projecting angle, which divides its anterior facet into two portions, of which one articulates with the scaphoid, and the other with the inferior calcaneo-scaphoid ligament. The ridge or angle, in the permanent stage of the deformity, finally projects so much that it locks on the scaphoid, and renders reduction impossible until it is removed. In such cases the head of the astragalus escapes partially from the scaphoid downwards and inwards, so as to form on the inner side of the sole a much larger prominence than that of the scaphoid.

The object of the operation devised by Mr. Ogston is to restore the astragalo-scaphoid joint to its normal position and rigidity, at the expense of producing anchylosis, by denuding the bones of their cartilaginous surfaces, placing the foot in a proper position, and securing its immobility by uniting the two bones with ivory pegs. Bearing in mind that the projecting head of the astragalus lies on the inner side of the sole, about an inch in front of the malleolus, and that the scaphoid is comparatively indistinct, the operation is done, under strict antiseptic precautions, in the following manner:

The foot, grasped by the hand of an assistant, having been placed with its outer side resting on

the table, an incision, commencing an inch from the tibia and carried for an inch and a quarter down to the bones, along the inner side of the sole over the joint, exposes the centre of the latter. The articulation having been freely opened by separating the attachments of the ligamentous capsule to the edge of the scaphoid for half an inch on each side of the wound, the cartilage and thin bony lamina of both the astragalus and scaphoid are removed with a sharp chisel, half an inch broad, through which the cancellous structure of the bones is laid bare. The arch of the foot having then been restored to its normal shape by the assistant depressing the metatarsus, two holes are drilled through the scaphoid into the astragalus, and small ivory pegs driven home, their projecting ends being cut off on a level with the scaphoid by a bone forceps. The lips of the wound are next united with catgut sutures, Lister's dressings applied, and the foot steadied with a few turns of plaster-of-Paris bandage. The patient is kept in bed for two or three months, and is able to walk freely in a week or two afterwards.

Mr. Ogston has performed the operation, thus briefly described, seventeen times on ten patients. In not a single case did the temperature rise above 100° F. The wounds remained aseptic, and the dressings were renewed only a few times. In all great benefit resulted, and in the majority a bony anchylosis and a painless arch were obtained, permitting the subjects to resume their laborious occupations. In one case an ivory peg was spontaneously extruded at the end of five months, but in the remainder it gave rise to no inconvenience. In a few the plantar arch was perfectly restored, while in all it was much improved, and added to the lightness of the patient's step.

With such results before us, we have to congratulate Mr. Ogston upon having brought forward this excellent operation for so troublesome and painful an affection as flat-foot in its confirmed stage. Under strict antiseptic precautions, it will doubtless yield good results in the hands of other surgeons, and we hope to see it fairly tested on this side of the Atlantic.

THE RELATIONS OF TUBERCULAR PHTHISIS TO DISEASES OF THE EAR.

THE coexistence of ear affections, accompanied by purulent discharge, and of tubercular phthisis, has been noted. At times, a discharge from the ear will have been first observed, followed speedily by tuberculosis of the lung; or the tuberculosis is first recognized, and there speedily follows a discharge from the ear, not in the last stages of the consumption, but while the patient is still strong, or, it may be, apparently improving as to the lung affection. In these cases there is usually observed a minute perforation of the drum of the ear at its lowest portion, which on this account is not easily recognizable. The patient, however, calls the physician's attention to it, because, in the act of sneezing, he hears the hissing sound produced by the air rushing through the opening in the membrane.

PROF. VOLTOLINI has sought to determine the relation of these two conditions, and published a preliminary communication in the *Deutsche med. Wochenschrift*, Jan. 10th. The question, of course, is, have we here a simple catarrh of the ear, an accidental concomitant with tubercular disease, or are they both the result of the same cause—in a word, tubercular? Prof. Voltolini has come to the latter conclusion, and bases his view upon the fact that he has found with absolute certainty Koch's bacillus in the discharge from the ear in two such cases.

OSTEOPLASTIC RESECTION OF THE ANKLE-JOINT.

THE most recent improvement in excision of the ankle-joint, and it is one which appears to have had no followers in this country, is the operation devised by Professor MIKULICZ, of Vienna, and described by him in *Langenbeck's Archiv*, Bd. xxvi. It is particularly adapted to cases in which caries is limited to the ankle-joint and the calcaneum, and affords a far more useful stump than does amputation through the lower part of the leg, or Pirogoff's operation, or Syme's amputation.

As we do not happen to have before us the original article, we copy from the last edition of *Gross's System of Surgery* the mode of performing the operation: "An incision is carried across the sole of the foot down to the bones from just in front of the tuberosity of the scaphoid to a point just behind the tuberosity of the fifth metatarsal bone. From the extremities of this cut, a second incision is extended on each side upwards and backwards to the corresponding malleolus, and united by a transverse incision through the posterior circumference of the leg down to the bones. The foot being flexed, the joint is opened from behind; the astragalus and calcaneum are carefully separated from the soft parts; and the knife is carried through the medio-tarsal articulation. The malleoli and the articular surface of the tibia, along with those of the cuboid and scaphoid bones, are then removed, and brought in apposition." During the subsequent treatment, the foot is kept extended, so that, after the parts are thoroughly united, the patient may walk on the heads of the metatarsal bones, as in talipes equinus.

The results of the operation are recorded by LAUENSTEIN and MIKULICZ in the *Centralblatt für Chirurgie*, No. 1, 1884, and the *Przeglad Lekarski*,

Nos. 36 and 37, 1883. Of Mikulicz's 3 cases, all recovered with good progression, but one died of pulmonary tuberculosis in nine months. Of Lauenstein's 2 cases, 1 recovered with good progression, and 1 died in eight months, of phthisis, which existed at the time of the operation, and was, therefore, an improper one for the procedure. In a sixth case, in the hands of Socin, the patient walked well. In all of the recoveries, the limb was lengthened, as a rule, from three-fifths to four-fifths of an inch, and one and two-fifths of an inch in the case of Socin, but the difference in the length of the limbs was equalized by a high-soled shoe worn on the sound foot.

THE RADICAL CURE OF CONGENITAL HERNIA.

IN last week's issue of THE MEDICAL NEWS, we directed attention to the modern operation for the radical cure of hernia. In this connection, it may be interesting to note that in congenital inguinal hernia the modern procedure is attended with peculiar difficulties; not only are the isolation and complete extirpation of the sac rendered almost impossible from the firm adhesions which exist between it and the cord and the testis, but the structures of the cord are spread out like a fan, the sac lying, as it were, in its centre. In these cases the surgeon must content himself with partial excision of the sac, and the question may arise whether, on account of the elongation and isolation of its vessels, whereby the vitality of the testis is endangered, it may not become necessary to sacrifice that organ.

KRASKE, in a paper contributed to the *Centralblatt für Chirurgie*, No. 1, 1883, recommends immediate castration; but this practice is warmly and justly opposed by Sonnenburg and Zeller, in the *Berliner klinische Wochenschrift*, Nos. 48 and 51, 1883, as being unnecessary and calculated to throw discredit upon the procedure. Instead of excising portions of the sac, Hahn has successfully resorted, in six cases, to obliteration of the serous surfaces by a row of catgut sutures.

The statistical results of the modern operation indicate that of eight cases in the hands of Zeller, Maas, Von Wahl, Busch, and Czerny, two were fatal—a mortality which demonstrates that it should not be resorted to unless for weighty reasons.

AN INSTITUTION FOR BIOLOGICAL RESEARCH.

IN his Presidential Address before the New York State Medical Society, DR. HUTCHINS calls attention anew to the almost utter neglect in this country of organized facilities for systematic instruction in biology. Harvard and Johns Hopkins are about the only schools offering any real opportunities. In this city, facilities of the kind are entirely wanting. None of our medical schools offer any such instruction. At the Academy of Natural Sciences, the rich museum, and the fine library and lectures on geology and mineralogy, are the only means afforded. They are splendid in themselves, but utterly inadequate to satisfy the wants alluded to. Accordingly, Dr. Harrison Allen has suggested in *The American* for January 26th, that a new institution—"The Biological Institute of Philadelphia"—should be established, with a director and an assistant as teachers. The expenses, he proposes, should be met partly by the fees paid by the students and partly from an endowment, which he suggests would be a fitting memorial of our great scientific gathering next September.

We certainly second the suggestion, and as heartily as possible. It is a most urgent need in this great city. We know of many students, men and women, who have been driven to Europe or to Baltimore by just such a lack of opportunity to study at home, to say nothing of the large number who would be drawn hither by such an institution. Its natural affiliation would be with the Academy of Natural Sciences, for, in its library and its museum nearly every possible want in these directions would be filled. Moreover, we have among us just the man for the place of director, a man of the widest reputation, of untiring energy, a tried and trusted teacher—no one could be named who could compete with JOSEPH LEIDY for the place.

GENERAL GRANT'S HEALTH.

THE condition of General Grant's health has, of late, been the subject of numerous newspaper paragraphs, containing gloomy prognostications. It, therefore, affords us pleasure to be able to state authoritatively that General Grant is doing very well, although his recovery from the effects of his fall has been delayed by an intercurrent rheumatism, affecting first the uninjured limb and then flying about to various regions. He walks about the house on crutches, and is waiting only for pleasant weather to go out.

PROFESSIONAL OPINION OF THE NEW CODE.

IN the discussion on the New Code at the late meeting of the New York State Medical Society, Dr. Roosa is reported to have said that "Letters had been received from the best men of many States, urging New York State to stand firm in shaking off the shackles of the so-called National Association, and promising that other Societies would follow the example."

It is greatly to be regretted that Dr. Roosa did not read these letters, so that the profession could have had an opportunity to form its own estimate of

the men who wrote them. However, we hope they will yet see the light of day, and not share the sad fate of those "heartiest endorsements of the course of the *Record* in its advocacy of freedom in consultations," which our New Code contemporary proudly said it too had received "from influential men in every part of the country," but which, notwithstanding our frequent and reiterated requests, it never showed its willingness to produce.

On looking over the yeas and nays on the vote to restore the National Code, we find that of the prominent New York members present, the following voted in favor of the New Code and against the National Code: Drs. C. R. Agnew, T. A. Emmet, A. Jacobi, A. L. Loomis, D. B. St. John Roosa, and F. P. Foster, of the *New York Medical Journal*, and G. F. Shrady, of the *Medical Record*.

REVIEWS.

DE L'ANUS CONTRE NATURE ILÉO-VAGINAL ET DES FISTULES INTESTINO-UTERINES. Par le DR. L. H. PETIT, Sous-Bibliothécaire a la Faculté de Médecine de Paris. 8vo. pp. 223. Paris: H. Lauwereyns, 1883.

ILEO-VAGINAL ARTIFICIAL ANUS AND INTESTINO-UTERINE FISTULÆ. By DR. L. H. PETIT.

WORKS on gynecology and the chapters on the diseases of women in works on surgery make but little mention of these affections. A case of ileo-vaginal anus, seen at the Hospital de la Pitié, in the service of Professor Verneuil, has recently caused M. PETIT to look up the literature of the subject. He has only found a few pages descriptive of the affection in classical works, but has found a large number of cases reported.

These cases, numbering twenty-three, have enabled him to describe accurately the causes, pathological anatomy, the symptoms, diagnosis, and treatment of ileo-vaginal anus. The affection follows strangulation of the intestine in a ruptured vagina, as a result either of an inflammatory or cancerous affection, which causes an opening of the intestine and vagina, and communication between the two.

As the process is the same, whether taking place in the uterus or vagina on the one side, and the intestine on the other, M. Petit has described ileo-vaginal anus and utero-intestinal fistula at the same time; the two affections only differ from the point of view of prognosis and treatment, but the points common to both are very important in practice from a diagnostic point of view, and it is on this account that M. Petit has described them together. With twenty-three reported cases of ileo-vaginal anus and sixteen cases of utero-intestinal fistulæ, he has compiled a monograph to which the Académie de Médecine awarded, in 1881, the Huguier prize—three thousand francs—and which has been recently published in the *Annales de Gynécologie;* and a brief *résumé* of it appeared in THE MEDICAL NEWS for Nov. 17, 1883.

SOCIETY PROCEEDINGS.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 7, 1884.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D., IN THE CHAIR.

THE evening was devoted to an adjourned discussion of the paper by DR. T. GAILLARD THOMAS on

THE PREVENTION AND TREATMENT OF PUERPERAL FEVER,

which was read on the 6th of December.

THE PRESIDENT, DR. FORDYCE BARKER, opened the discussion by the reading of a paper on this subject (see page 182).

He prefaced it with the following remarks:

During the five years which I have had the honor to occupy this Chair I have never before seen a meeting of this Academy so enthralled by the charm of elocution, the fascination of rhetoric, the glow of conviction, and the air of one who speaks by authority—an air which can never carry weight unless it has been before fairly and justly earned by good work—as on the evening of December 6th, when the paper was read on "The Prevention and Treatment of Puerperal Fever."

Its authoritative tone, its earnestness and sincerity, its coloring of being based on experience and observation, instead of being unconsciously deduced from preconceived theory, give the paper such a plausible air of scientific truth as must secure its acceptance without question by many minds whose belief rests on authority, without examination of the data or analysis of argument. The more eminent the author of errors which may dangerously influence medical practice in matters of such vital importance as the saving of life of those who have just become mothers, the more striking the literary excellence and the more admirable the artistic merits of a paper promulgating such errors, the more necessary it is that such errors should be boldly met and promptly refuted. Any paper read before this Academy, by one to whom all concede a place among the most eminent in the department of the profession to which his life has been devoted, if allowed to pass without examination and discussion, will be accepted by great numbers in all parts of the country as a statement of the science and medical practice as enunciated by the most prominent men of the period. It is therefore a duty to examine carefully those novelties in doctrine and in practice which are brought here, and subject them to the test of the advanced science of the day and the accumulated experience of the past.

All will agree that the paper was remarkable for its originality, in that some of its pathological doctrines and the practice inculcated for the prevention and treatment of puerperal fever have never been taught in any work on obstetrics, or by any writer of acknowledged repute. If they are accepted by the common intelligence of the profession, they will assuredly be found in the obstetrical works of the future.

As there are many others who will take part in this discussion, whom all will be anxious to hear, and as the author of the paper is entitled to all the time he

may wish to close the debate, I shall, in the most concise language consistent with clearness of statement, give my reasons for thinking that the whole tone and coloring of the paper are misleading and dangerous, because it is supersaturated with septic infection. I would not "speak disrespectfully" of puerperal septicæmia. I believe it to be one of the most dangerous incidents which may occur to women after childbirth, and I trust it will not be regarded as indelicate if I allude to the fact that in a work on puerperal diseases, published more than ten years ago, a lecture devoted to the consideration of this subject in all its relations fills thirty-seven pages. With the most anxious desire to correct any errors of opinion, and to accept any new views which progressive science or increased and more accurate clinical observation have demonstrated to be true, I have yet found no reason to make any essential change of the views expressed in that lecture.

At the conclusion of the paper Dr. Barker made a few extemporaneous remarks, in which he said that in the early part of his professional career he had used antiseptic vaginal injections. Nearly thirty years ago at Bellevue Hospital he had employed Labarraque's solution for this purpose, keeping up the injections for almost a week after labor. Subsequently carbolic acid was substituted for this, and in his work already referred to he had given the formula which he had always made use of. This practice he had habitually maintained, both in private and public practice, until within the last three years. While attending the meeting of the International Medical Congress in London, in 1881, he was sitting on one occasion next to Thomas Keith, of Edinburgh, and was very much impressed by some remarks which he made on the subject of antiseptics in ovariotomy. They were so suggestive that they caused him to give the matter in its relations to the parturient woman very deep reflection, and he began to ask himself whether many of the interruptions to convalescence which he sometimes met with in his obstetrical practice were not really due to the carbolic acid injections employed. On his return to New York in September, therefore, he reduced one-half the strength of the solution of the acid which he was accustomed to use, and so pleased with the results thus obtained was he, that after a time he gave up using vaginal injections altogether. He felt the less reluctance in doing this from the reflection that even in its strongest form the strength of the solution was not sufficiently great to destroy microorganisms, if any were present. He also asked himself whether nature did not act wisely in bathing all the parts concerned in the process of parturition with that bland but malignant fluid—the lochial discharge—and, consequently, whether it were not better to leave all the parts at rest, in imitation of the surgeon in the treatment of wounds.

It was now fully two years since his colleague, Dr. A. A. Smith, and himself had ceased using vaginal injections altogether, as a rule. It was now his practice, therefore, in every instance to direct the nurse not to use injections unless expressly ordered to do so, in consequence of some special condition calling for it. The results had been exceedingly satisfactory, and since September, 1882, when the injections were given up, neither he nor Dr. Smith had had a single case in which there had been any interruption to recovery, or in which it had been necessary to give more than the ordinary attendance, viz., one daily visit for nine days after labor. This might be simply a coincidence; but his experience had been so suggestive that he trusted that others also would try the experiment and make known the results met with.

DR. W. M. CHAMBERLAIN said that he would merely like to make one or two remarks in regard to his tube, to which Dr. Thomas had referred in his paper, and which he stated he had had occasion to modify by making an opening just at the extremity, and by bringing the other openings nearer the latter. One of these modifications (the second) he had already anticipated himself, and he could see no objection to the other. One of the gentlemen who took part in the discussion of Dr. Thomas's paper said that he had found the tube too large; but in all the autopsies of patients who had died from puerperal septicæmia which he had seen, the uterus was found to be large and flaccid; while if the uterus was firm and globose, he was accustomed to look for some other cause of death than septicæmia. It was only in this large and flaccid uterus that the tube was required at all, and hence he believed that it was desirable that the tube should be large. Another reason why he had made the tube as large as three-eighths of an inch in diameter was that it was designed to act as a lever as well, and by lifting up the anterior lip of the os uteri, allow ample room for the escape of all the fluid used in the injections. As to the objection that on account of the vaginal openings all the fluid was liable to escape from the tube before it reached the uterine cavity, he did not think it was valid, because by reason of the smallness of these orifices as compared with the large capacity of the tube, it was impossible that all the fluid should thus escape. In regard to the general subject before the Academy, he hoped that Dr. Garrigues would be heard from, since his recent observations were of great interest, and seemed to be of practical importance.

DR. H. T. HANKS believed that Dr. Thomas's paper would have a vital and lasting influence upon the practice of obstetrics in this country, and that when the rules which he had laid down for the prophylaxis of puerperal fever were generally adopted by the profession, the mortality of childbirth would be materially diminished. This was a disease which was not confined to the cities. During the five years in which he had engaged in rural practice in Massachusetts, he had one case, and this he proceeded to relate. He also mentioned other cases occurring in the country, and then went on to say that he believed that at the present time the profession was ready for any judicious plan which promised better results than those attained in the past. The vital statistics of New York showed that in the year 1883, out of 31,669 women who had been confined, 262 had died; which in the four years, 1880, 1881, 1882, and 1883, the mortality had been 1005. These were startling figures, and it was a reflection worthy of consideration, that many of the victims of puerperal septicæmia would not have contracted it if proper measures had been adopted for its prevention, or, if they had been attacked, might have been cured by appropriate treatment. That the profession in this city was becoming alive to the importance of septicæmia as a concomitant of parturition, however, was shown by the fact, that each year the relative number of cases reported as puerperal septicæmia, as com-

pared with those given under the old designation of puerperal fever, was increasing. During the past fifteen years he had attended about sixty-five cases of midwifery a year. Among these, some of the patients had had puerperal fever, and there had not been a single case of this in which all the trouble could not be satisfactorily explained on the hypothesis of septicæmia.

As a whole, he thought that Dr. Thomas's rules for prophylaxis were admirable, though there were one or two to which he would take exception. The ante-partum injection he thought was unnecessary; the use of the napkin over the vulva being sufficient before labor. The administration of ergot three times a day for a week he believed to be neither necessary nor justifiable, as the drug was harmful except in certain cases where the uterus did not contract well. If laceration of the perineum were found to have occurred, he advised that one deep suture (two at most) should be taken and secured with shot. In no case should the long loops of silver wire be left to become a source of irritation. If the patient, however, were greatly exhausted, or if the laceration extended through the sphincter ani, the primary operation was to be postponed, since even the secondary operation sometimes gave rise to severe fever, and subjected the patient to more or less danger. He fully agreed with Dr. Thomas as to the utility of frequent vaginal injections; but he was not favorably impressed by the use of the iodoform suppository.

In regard to the treatment, he had only one or two suggestions to make. One was that the administration of aromatic spirits of ammonia, in doses of half a teaspoonful, every two hours, would be found of service. In making use of the intrauterine injections, he thought with Dr. Hunter that it was not advisable to move the patient to the edge of the bed, as Dr. Thomas had recommended; and in order to avoid this, he had devised a simple bed-pan of block-tin, constructed in such a way that the patient could lie upon it with perfect comfort, and that the injections could be made with great facility. (This bed-pan was now exhibited by Dr. Hanks.) It was only proper to use intrauterine injections, he believed, when there was a strong probability that the cause of the trouble was within the uterus. The refrigerating coil he thought of service in certain cases. A few of Dr. Thomas's suggestions, however, could be safely dispensed with. In conclusion, he said that there were four assistants upon which he always relied in his management of obstetrical cases, and these were—pure air, absolute quiet, judicious diet, and the use of appropriate antiseptic measures.

Dr. William T. Lusk remarked that the papers of Dr. Thomas and Dr. Barker, although apparently so antagonistic, in reality seemed to supplement each other in many points, and, therefore, we could hardly spare either of them. To him, personally, puerperal fever was precisely the same as surgical fever. He believed in their absolute identity. There were great difficulties in the way of constructing a good definition of puerperal fever, and no two authors seem to be able to agree in defining it. Puerperal women were peculiarly susceptible to extraneous poisons, and hence when such women contracted diseases, like scarlet fever, for instance, the affection should be regarded as a complication. As regards the relations between puerperal and surgical septicæmia, there were certain dissimilarities in the two which were due merely to anatomical differences. In the latter there was a clean-cut wound, while in the former we had an œdematous condition of the cervix, enlarged veins, and lymphatics, and other mechanical conditions, which peculiarly favored absorption. Hence, if the same septic matter were brought in contact with a clean-cut wound, and with the genital organs of a woman after parturition, certain differences in the effects produced would be noticed. There was not only the rapidity of absorption, but the nearness of the peritoneum to the uterus, to be taken into consideration in the case of the parturient woman. A great deal of confusion and difference of opinion had grown out of the fact that writers did not keep in mind the marked distinction between putrid intoxication and septicæmia. The distinction between the two, which was thus too often lost sight of, depended simply on the presence or absence of certain micro-organisms in a decomposing fluid. Rod bacteria, it had been demonstrated, were not absorbed in the human subject, and if carried on the hands of the accoucheur to the maternal parts, there was no danger of their communicating sepsis. The putridity of any discharge, therefore, was not the source of septicæmia proper. Putridity, however, was to be regarded as a warning that the round bacteria, which were the real source of danger, were likely to be generated. These were capable of being absorbed, multiplying rapidly, and becoming distributed to the various parts of the organism. They often penetrated to a distance from the lesion by which they entered the system; but if they were of feeble activity they might merely give rise to local inflammations, like cellulitis or peritonitis. But it was not the pathology which he wished to discuss on this occasion; though on account of the fact that the two forms mentioned were so frequently confounded, he had thought it well to allude to them, especially as the treatment most successful in the one was not adapted to the other.

In regard to the prophylaxis, Dr. Lusk said that he thought that we should be careful not to lay too much of a burden upon the practitioner in the way of minute details, which might not, after all, be of much consequence. For instance, he should not expect much benefit from washing the walls and furniture with antiseptic fluid. This opinion was founded upon his experience in hospitals. In the lying-in wards of Bellevue Hospital there had been no pictures on the walls, and no superfluity of furniture, and it had been the practice to wash thoroughly the walls, floors, and such furniture as there was with a five per cent. solution of carbolic acid; but this procedure had never had the slightest effect in preventing the development and spread of puerperal septicæmia. He had his doubts, therefore, whether the observance of this rule would be of benefit in private practice. Afterwards, he had been in the habit of fumigating the hospital wards with sulphurous acid, as was the ordinary practice of the sanitary authorities in houses where cases of infectious disease had been found. In private practice it was certainly the part of prudence to adopt this precaution before attending a case of confinement in any house where there had been a case of diphtheria, scarlet fever, or other similar affection, if it had not already been done. One point which was of considerable practical importance, he thought, was that the patient should not be confined in

a room adjoining a water-closet. The puerperal woman was peculiarly susceptible to sewer-gas poisoning, and he could recall two or three cases of trouble after labor in which the bad odors from the neighboring water-closet seemed to offer the only satisfactory explanation of the illness. When labor was concluded there was not likely to be primary decomposition within the uterus, from the fact that, under ordinary circumstances, no air was admitted to the uterine cavity. In the vagina, however, the conditions were somewhat different. There there were heat, moisture, and air, and putridity might possibly result. The practical point in this connection was, that if antiseptic vaginal injections were resorted to when the symptoms first appeared, all trouble would soon vanish. But in cases where the hand or instruments had been introduced into the uterus during labor, those conditions were left which were liable to result in putrid intoxication. Hence the use of intrauterine injections was likely to be of great benefit, and might, perhaps, save the patient's life. If any such procedure was necessary, therefore, it was by all means best to wash out the cavity of the uterus during the labor.

In cases of true septicæmia, where germs (round bacteria) had penetrated into the system, irrigation of the uterus was not of the slightest benefit. It was like attempting to prevent the inoculation of the system with vaccinia, by washing the abraded skin with a sponge after the vaccine virus had once come in contact with the blood. Irrigation was of no use unless there was a "puddle" in the uterus. One injection might, perhaps, do good; but the continuation of them was likely to be injurious. Dr. Lusk then went on to say that when he was in Europe during the past summer, he had visited a number of the principal lying-in institutions there, and when he had inquired whether they now washed out the uterus in puerperal women, the answer was always the same, viz., that if no air had been allowed to enter the uterine cavity during labor, they let the uterus alone. If the hand or instruments had been introduced, on the other hand, they always washed it out. In Vienna it was the practice to use a suppository composed of iodoform and gum tragacanth, and last year the mortality, which for some years previous had amounted to five or six per cent., was reduced to one death in two hundred cases. At Prague the iodoform was not used, but the results lately attained were very remarkable, as out of eleven hundred cases of confinement there had not been a single death from septicæmia. Neither was the intrauterine douche employed there, except under special circumstances, and it was since the indiscriminate use of injections had been abandoned that these good results had been arrived at. These were now reserved for cases in which well-defined indications existed, such as the presence of decaying matters in the uterine cavity. In the main, he agreed with Dr. Thomas as to the use of antiseptics in obstetric practice.

DR. P. F. MUNDÉ said that it had been his fortune to meet with a number of cases of septicæmia, both in hospital and private practice. Of late he had been accustomed to employ local treatment, precisely as in the case of ordinary wounds, and had arrived at the conclusion that this was the proper method of dealing with puerperal septicæmia. He felt that it was his duty to wash out the cavity of the uterus if there was a putrid discharge, accompanied with pus and other evidences of constitutional disturbance. At the same time, he wished to qualify his opinion in regard to the general subject, since in certain hospital cases which he had met with there seemed to be an entire absence of evidences of inflammatory action, and the presence of something altogether different from ordinary septic infection. These were cases in which he agreed with Dr. Barker that sepsis was not the primal cause of the trouble. This was, indeed, only an opinion; but he was willing to stand by it. But, whatever the etiology, he would take the risk of washing out the uterus whenever he met with fever and offensive lochia.

In regard to the method of making intrauterine injections, he agreed with Drs. Hanks and Lusk, that it was better not to change the position of the patient to the edge of the bed, as Dr. Thomas had advised. As to the use of the Davidson syringe, he objected to that on theoretical grounds, as he did not believe in injecting fluid forcibly into the cavity of the uterus. He had met with one case in which it had produced nearly fatal collapse on the ninth day, and he thought there was very considerable risk of injecting the antiseptic solution into the uterine veins. There are considerable dangers met with in the use of intrauterine injections, which he thought Dr. Thomas had not sufficiently emphasized in his paper. After the lochia became pure, he thought it was advisable to discontinue their use, even if the temperature remained high. It was of no benefit whatever to go on with them, and their continued use might perhaps do harm. Like Dr. Lusk, he thought that after septicæmia had gained a foot-hold in the general system, it was of no service to go on making local injections. In one case that he had met with, the introduction of the tube into the uterine cavity was followed by a slight hemorrhage, which was probably the effect of the end of the tube impinging upon the fundus, and after every subsequent injection a little blood came away. If in any case the lochial discharge ceased altogether, it was the duty of the accoucheur to make a thorough examination, when it would probably be found that the uterus had become anteflexed, and the escape of the discharge thus prevented. In such cases the uterus must be straightened and a tube passed into its cavity, when the temperature would probably at once fall. The Chamberlain tube, he thought the most convenient instrument to use; but in the *Boston Medical and Surgical Journal* and other periodicals, cases had been reported in which air had been forced into the uterine cavity through the lateral openings. As to the choice of an antiseptic, carbolic acid had done well enough up to the present time; but in the light of recent researches, corrosive sublimate would seem to be preferable. The objections to washing out the vagina after normal labor, he believed to be valid, and hence he would advise the same treatment in this part as in the uterine cavity: if there were any septic material present, use the injections; but if not, refrain from doing so.

DR. GAILLARD THOMAS was then requested to close the discussion. He rose and said:

Mr. President and Gentlemen: When quite a young lad I was present at a murder trial which made a deep impression on my mind. When the case had been presented the attorney for the Commonwealth, who was a florid and rather bombastic orator, got up and made a

speech of two hours. At the close all were very anxious to hear the counsel for the prisoner, who had a reputation for great eloquence. Judge of the surprise of the audience when he arose and quietly said: "May it please your Honor, the case is closed; I rest it here. The gentleman on the other side has made so able a speech in favor of my client, that I rely upon it for his acquittal." The prisoner was acquitted. I feel very much in this way with reference to the paper of Dr. Barker, to which I have just listened with feelings which I know you, who are his well-wishers, fully share with me—feelings of surprise, regret, and sorrow. Discussions such as this cannot fail to do good, however, for I am a believer in the old Latin adage, "*Ex collisione scintilla.*" And although, in view of the very grievous errors which, according to my distinguished colleague, I have brought before the profession and suggested for its adoption, I may be preferring silver to gold in deciding in favor of speech instead of silence, I feel called upon to say a few words in simple self-defence—that first law of nature.

Our honored President has been very guarded in opening his attack upon my paper, and has seemed to feel concern 'lest its author should take offence at his sallies. Let me assure him and you that it would take a great deal more than such a discussion as this to weaken the ties of friendship which a quarter of a century has cemented between us, or to cause me to take exception to the criticism of one whom I have often in times past encountered in the lists of debate, and have ever found just, magnanimous, and courteous.

But, alas, gentlemen, my adversary has to-night incautiously and, I think, unwisely ventured to use against me that dangerous weapon, a two-edged sword, ridicule. Right mercilessly has he given me one edge; let him beware of the other.

As I saw him draw and flourish this weapon a few minutes ago, I experienced mingled feelings of pleasure and of pain. In a scientific discussion, more especially in a debate which directly and immediately concerns the saving of human life, which at this very moment is being deplorably sacrificed in our very midst, ridicule, elsewhere a powerful weapon, is the poorest and most pitiful of arguments. It is the resort of the weak, not of the strong; and as my adversary used it just now, I said to myself, "he feels himself to be very, very weak; he totters upon his pedestal; 'tis pity that he should feel so; for otherwise that master pen, which so often, in times passed, has enchanted us, would not to-night emit what carries pain to my heart and to the heart of every true friend of his in this assembly; of irritability and of spleen, all of which are so little characteristic of his real nature; otherwise I should not be able to recognize, as all others must do, the utter want of logic, the complete absence of argument, the total neglect of appeal to facts, and the very conspicuous presence of signs of wounded *amour propre*, which, like an unwholesome stream, meanders through his essay."

I shall not detain you long. I have little to say, for Dr. Barker's attack calls for no rebuttal, and demands no argument on my part. I said all that I had to say on December 6, when the original firebrand was thrown down, and picked up by the wrong end by my excellent friend. There are, however, one or two points upon which I must touch to avoid misrepresentation.

Dr. Barker declares the pathology which I have advocated to be unsustained by even the most recent researches of those whom we recognize as guides. He appears to object to the fact that I have not stuck closely to the dicta of our text-books, and hugged to my soul the tenets of a by-gone time, as he has done. This is hardly fair. I strove to follow the advice of Billings when he says, "have something to say; say it; stop when you have said it." Had I had no opinions of my own to offer you; had a practice in a large metropolis and in great hospitals taught me nothing during a period of thirty years, I should not have appeared before you. And let my adversary inform himself upon the recent views of pathologists upon this subject, and he will find it is his views which are effete, not mine which are jejune.

I am very sorry that, owing to the weakness of his position, my adversary has felt constrained to exaggerate to the very verge of misrepresentation, and to attempt to display, under the lurid light of ridicule, my statements with regard to the lochial discharge. As far as I can gather anything certain from his discursive paper, the pivotal idea of Dr. Barker's attack seems based upon the belief that I regard the lochial discharge as a poisonous fluid, which by absorption by abrasions in the genital tract gives rise to puerperal septicæmia. I need not tell you that no such absurd idea ever obtained foothold in my brain or enunciation from my tongue. If his idea be this, he has been guilty of very superficial reading of my paper, and should not so easily have concluded that I was affected by idiocy. Look at my essay, which is now in print, and you will see, what you already appreciate must be the fact, that I stated that the lochial discharge was a material ready to take on those alterations which are effected by micro-organisms of bad character, and which, changing its nature, render it poisonous to the abraded tissues. I believe that you will find that the pathology which I have there offered to you, is merely abreast with the views of the advanced pathologists of Germany, France, and Great Britain. As to the pathology of my adversary, Dr. John Thorburn, of Manchester, England, very justly expressed concerning it, I think, the accepted view of the profession, when, in a foot-note to an article upon "Metria," which appears in the *British Medical Journal* of August 11, 1883, he says: "It would be inexcusable not to make some reference to the very able papers of Dr. Napier in the *Obstetrical Journal* for 1880, on puerperal fever. He, along with Fordyce Barker, defends the old position of a specific puerperal fever *sui generis*. The time limit imposed by our regulations, allows no opportunity of consulting, step by step, such arguments as he advances. I can only say that his invaluable collection of facts produces in one an opinion diametrically opposed to his own."

My critic upbraids me for want of thoroughness, and sketchiness of detail with reference to my description of symptoms. I will merely say, with reference to this, that I intentionally assumed this style, as I was not preparing a lecture for a class of medical students, and my paper was distinctly announced to be one upon "The Prevention and Treatment of Puerperal Septicæmia," and upon nothing else. I cannot but thank him for his kindness in comparing my style, in this sketchy description of symptoms, to that of Byron and Humboldt (I

believe these were the authors with whom he compared it), but, alas! as I recall the passages to which he alluded, I am pained to confess that the similarity of style does not strike me as forcibly as it does my partial friend.

Here let me draw the veil of pitying silence over the unfortunate allusion to the squib of Stepney, and the relics of the Hotel de Cluny! We stand to-night upon ground consecrated to science by the dignified fathers of the New York Academy of Medicine, who have now passed away. We stand face to face with the terrible mortality which marks puerperal fever at this very moment.

And now, Gentlemen, a few words as to the prevention and treatment of puerperal fever, which is the only legitimate subject before us for discussion this evening; the only theme which should not at the very commencement of these exercises have been rigidly ruled out, as irrelevant, by our President.

How difficult is it in a large body like this to keep the discussion properly directed to the point at issue! I hope that those who have discussed my paper will pardon me for saying, that we have heard a great deal to-night in way of repetition of what my paper contained as to pathology, a great deal about tubes, and the number of holes which should be made in them, and diverse opinions as to whether or not a suppository of iodoform should be put into the vagina, and small doses of ergot given for a week or so post-partum; but these are non-essentials and hardly worthy of the valuable time which has been given to them, when so much of greater importance remained to be considered. The crucial questions, Fellows of the Academy, which are before you to-night, are these: 1st. Are you to look upon puerperal septicæmia as a poison due to the development of micro-organisms, and are you by every means in your power to guard against the contact of these with the genitals of the puerperal woman? And 2d. When the disorder is developed is it best for you to keep your patient semi-narcotized and quininized, while the distended abdomen is covered with stupes of turpentine or poultices, and await the result, as has formerly been done; or are you to seek to destroy the septic germ which has invaded the genital tract, by local application? These are the great questions; the other points are non-essential ones, and, although important in some respects, sink into insignificance when compared with these.

Take, for example, the first of my suggestions as to the cleansing the lying-in room and applying antiseptic solutions to its walls and floors before labor sets in. This seems to appear to some like one of the labors of Hercules; and a very valued friend of mine, one of the most eminent obstetric professors of this city, seems so firmly to keep his eyes fixed upon it as to allow it to draw his gaze away from others which are of tenfold its value. Now, Gentlemen, what is really the difficulty of doing this thing? In the cottages connected with the Woman's Hospital it is regularly done whenever a new patient comes in for laparotomy, which is on an average once a week; and whenever I operate in private practice, let the operation be as trivial as it may, I always insist upon its performance. A scrubber—and there are many women in New York who make such work a business—takes up the carpet and sends it to the Naphtha Cleaning Works, or replaces it by rugs. She then scrubs the floor and furniture with a solution of carbolic acid or the bichloride of mercury. Then, covering a broom with a towel, she stands upon a pair of steps, and, dipping this in a bucket, she wipes off the walls and ceiling. The whole work of cleansing a chamber occupies a few hours. Dr. Lusk has said that he has never seen any good come from scrubbing furniture with an antiseptic solution. Agreed. I have never seen it do any harm, and until I do so, I shall feel that it is safer to resort to it. But, Gentlemen, I am not particularly enthusiastic about this cleansing of the chamber, nor do I regard it as by any means essential. If any gentleman prefers to have his patient confined in a dirty room rather than a clean one, let him do so by all means. I do not gainsay it. If I need any defence for having pressed the claims of cleanliness in this regard, let it be found in the fact that he who offers rules for a system, must aim high, not low; that, aim as high as he may, many will fall below the standard; that if a low level be assumed, no one will go above it and take a higher.

My second suggestion for prevention, has reference to complete change of clothing and the taking of an antiseptic bath by doctor and nurse, before taking charge of a lying-in woman, if they have knowingly been exposed to the effluvia of septicæmia, erysipelas, scarlet fever, typhus, or any similarly contagious affection. Will any one object to this as unnecessary or impracticable? I think not. Yesterday at 4 P.M., I saw in Stamford, a very bad case of puerperal septicæmia; this afternoon at 3, I performed Tait's operation upon a very important case, which could not be delayed. I ventured to do this only under these circumstances: this morning I took a bath of hot water strongly impregnated with salt, and after it shampooed my hair and beard thoroughly with a saturated solution of boracic acid, scrubbed my hands thoroughly, by means of a nail-brush, with a solution of the bichloride one to one thousand, and changed every article of clothing which I had worn at the moment of exposure. The trouble was not great, nor was the process a disagreeable one. It may have done no good whatever, but I feel sure that it did no harm, and it certainly quieted my conscience and gave me a feeling of comfort that I could have obtained in no other way.

My third suggestion was that during labor, a warm antiseptic injection should be administered to the patient by the nurse, about every four hours, and that a towel wrung out of this warm solution should be laid over the vulva. Who objects to this? "If any, speak, for him have I offended." It is very soothing to the patient, and it is difficult to see how she could be injured by it.

My fourth suggestion merely relates to cleanliness of the hands on the part of doctor and nurse. The propriety of this I shall not discuss.

No one will quarrel with my fifth and sixth, which merely require the physician to attend intelligently and faithfully to the performance of the third stage of labor, and the examination for, and closure of, wounds about the vagina and ostium vaginæ.

I now come to the seventh suggestion, the use of vaginal injections every eight hours, beginning eight hours after delivery. The arguments which have been brought up against this practice since I read my paper, have had great weight with me. I confess I feel less

firm in my conviction upon this point than I did, and that in future I shall examine the question carefully before I determine to adhere to my plan. You may ask, Why this change of opinion? My answer is that I strive to mend the fault of yesterday with wisdom of to-day.

The rest of my rules will be so certainly agreed in that I cannot question the concurrence of all, even of the eminent gentleman, our President, who regards my efforts as so hurtful to progress and so dangerous to the community to whose medical guides I have made appeal.

A few words now, before closing, upon some of the means which I have suggested as to treatment. With reference to my present views upon the use of cutaneous refrigeration for the controlling of high temperature, however produced, and in the course of whatever disease occurring, I would—after a very extensive experience—say this: Were the laws of my country to prohibit a resort to this method, I would be unwilling to continue the practice of my profession, for I could not do so without relinquishing what I sincerely believe to be one of the most valuable therapeutic resources at the disposal of the physician.

In regard to intrauterine injections, if I have expressed myself in such a way as to allow it to appear that I resort to them with very little provocation and upon all occasions when hyperpyrexia supervenes after childbirth, no impression could be more erroneous. No one could have striven more than I have done to keep within proper bounds, the indiscriminate use of this valuable but dangerous resource. Let me illustrate my feeling with reference to this subject in the following way: I believe that the operation of trachelorrhaphy, as introduced by my friend Dr. Emmet, is one of the greatest advances which a quarter of a century has seen in gynecology. I believe that at the present moment it is doing a great deal of harm on account of its indiscriminate and too frequent performance; many seeming to believe that every woman who bears a child requires a resort to it. Does this militate against the great value of the procedure? Not at all, "*Uti sed non abuti*" might well have been written over its original description, as in olden times it was inscribed upon the case which held the lancet.

My friend, Dr. Barker, must here allow me to offer him a most full and sincere apology for not having accorded to him in my paper the credit which was his due in connection with the introduction of intrauterine injections into obstetric practice. I know that he will freely forgive me when I state that the omission was due to ignorance on my part of the facts which he has stated to-night, and not to any intentional neglect.

Dr. Mundé has expressed the opinion that I have not sufficiently guarded my readers against the dangers of intrauterine injections. As I recall my statements, I cannot but feel that he is in error upon this point, for I certainly strove to the utmost of my capacity so to depict these dangers as to put every man upon his guard concerning them.

I have not been surprised to notice, among other criticisms of the preventive measures which I have suggested, a tendency on the part of some to ignore the necessity for them, especially in private practice. That this would in all probability be done, I suggested in my paper, and I came here this evening prepared to use some statistics which would invalidate this position. I shall not use those which I brought, however, but employ, in their stead, some which have been offered by the speakers of this evening. Dr. Hanks declares that more than two hundred and fifty women died from puerperal septicæmia in this city last year; that is, two hundred and fifty to a million inhabitants. The United States probably contains, in round numbers, forty million inhabitants, which would give us ten thousand deaths in one year, and in twenty years, which is about the average childbearing time of women, two hundred thousand deaths. Surely, this looks as if something should be done to lessen the mortality of this disease. Does the plan which I have suggested accomplish this result? Let Dr. Lusk answer. He has just told us that in Prague, before a similar plan was adopted—that is, before antiseptic surgery was introduced—they lost five per cent. of hospital puerperal patients by septicæmia; since then eleven hundred women have been delivered without a single death. I hope that I am correct in my quotation of Dr. Lusk; I think that I am.

And now methinks I hear a whisper to this effect: these are the statistics of hospitals; the disease must be rare in private practice, for has not Dr. A. told us that he, out of 500 cases, has had no death; Dr. B. that, out of 1000, he has had none; and Dr. C. that, out of 1500, he has met with only one. Patients are constantly dying from this cause in private practice, nevertheless. It is now just two months since I read my paper, and during that time I have been called to five cases of puerperal septicæmia, four of them, at least, in the higher walks of life, and all four of the most desperate character.

I prefer to state with whom these patients were seen and I feel sure that my colleagues who called upon me will appreciate my motive, and pardon me for doing so. The first case I saw with Dr. Glück; the second with Drs. Hutchison, Crane, and Paine, of Brooklyn; the third with Dr. Lyons, in which suppurative synovitis and abscesses had followed a miscarriage; the fourth I was called to by Dr. Lowenthal, but could not attend; and the fifth I saw yesterday, in Stamford, with Drs. Janeway, of New York, and Phillips and Hurlburt, of the former place. I have ventured to give the names of the practitioners with whom I saw these cases to prove that they occur even under the most favorable circumstances as to social surroundings and medical care.

And now, Gentlemen of the Academy, let me thank you for the kind and courteous attention which you have given me. It is that attention and that courtesy which have emboldened me to detain you so long. I feel very sure that you will give full credence to two statements which I make in bidding you good-night: First. That I have no wish to be dogmatic and uncompromising in reference to the rules which I have suggested for the prevention and treatment of puerperal septicæmia. Second. That if venom has seemed to flow from my tongue it has not reached it from my heart, which has been entirely free from it; and that if I have seemed to strike too trenchant blows at the learned head of our President, I have struck purely in self-defence at one for whom I would yield to no man in respect, admiration, and affectionate regard.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 22, 1884.

THE PRESIDENT, R. F. WEIR, M.D., IN THE CHAIR.

HABITUAL DISLOCATION OF THE ULNAR NERVES —MYOSITIS.

DR. F. LANGE presented a patient, a violinist, who, about a week ago, immediately after more than his usual amount of labor, began to suffer from a severe pain in the muscles of the right forearm, near the elbow-joint, and especially very near the internal condyle. The severe pain lasted only a short time, but the pain did not cease entirely; increased during the next two days, after repeated use of the arm, and on the third day was again so severe that every movement at the elbow-joint was impossible, and the patient suffered intensely. He was under medical treatment for a number of days, and he called to see Dr. Lange last Saturday, when it was noticed that there was some swelling corresponding to the muscles of the forearm, which took their origin from the internal epicondyle, and there was a very tender spot at the end of the ridge through which the ulnar nerve passes. Closer examination determined the existence of luxation of the ulnar nerve between the olecranon and the internal condyle at every attempt to flex the forearm. The nerve could be traced quite distinctly, and rolled freely under the thumb and finger, so that in a semiflexed position it could be dislocated around the protruding point of the epicondyle. The most painful point, however, was where the nerve entered the muscles. In the left arm also the ulnar nerve could be easily moved under the thumb and finger, and the question arose whether the difficulty in the right arm pertained primarily to the nerve or to the muscles. Dr. Lange thought, however, that the case was one of myositis, involving the muscles which have their origin in the region of the internal condyle, and thought perhaps also that the sheath of the nerve had become involved. There were no peripheral alterations pointing to a lesion of the nerve itself.

EXCISION OF THE ELBOW-JOINT.

DR. LANGE also presented a patient in whom he had excised the left elbow-joint nine months ago. She was presented for the purpose of exhibiting an apparatus—described already some years ago—which he had used after this operation with considerable advantage, and which he regarded as useful, especially in those cases in which a great deal of bone has been removed and the new formation is comparatively small, and also where a great deal of abnormal mobility exists. The idea involved in the apparatus is that some slipping of the bones be allowed in such a way that the bones of the forearm are somewhat forced backwards, and an adjustment effected which imitates their physiological apposition. At the same time the joint, by means of rubber strings, is kept in semiflexion. The exercises are done by trying to keep a weight grasped with the fingers, and not allowing it to extend the forearm. In this way the point of support is transferred to the attachment of the rubber strings, a lever action takes place, by which the bones at the forearm are still more brought into coaptation. The weights must be chosen so that they are slightly too heavy, and slowly pull the arm into an extended position. Active extension alone is practised in applying weaker artificial flexors. He thought that after the apparatus had been worn for a year or more, functional ability of the forearm would be very much improved.

DR. J. C. HUTCHISON inquired whether the motions of the forearm without the apparatus improved any.

DR. LANGE said there was improvement, but it was very slight, and the movements of the forearm were very uncertain without the apparatus, which had been worn for a very short period of time, she not having had any orthopædic treatment for a number of months.

DR. J. L. LITTLE referred to a case in which he excised the elbow-joint, and the instrument-maker constructed a similar apparatus, which had enabled the patient to use her hand ever since she began to wear it. While wearing the apparatus she was able to accomplish considerable work, but when the apparatus was removed the arm was perfectly useless and hung by her side. The apparatus did not permit of the slipping of the bones, as did that exhibited by Dr. Lange.

DR. H. B. SANDS read a paper on

INTERNAL ŒSOPHAGOTOMY.

(See THE MEDICAL NEWS for February 9, p. 145.)

DR. POST remarked that Dr. Sands had suggested, as prophylactic treatment, that dilatation be commenced a week after the injury. He would suggest that a week would be rather early, and that two or three weeks would be better, as it is only after the sloughs have separated and the reparative process has become well established that the contraction begins to take place.

DR. SANDS remarked that his patient was about the house and apparently in pretty good health four days after the injury; and he would prefer to give, as a rule, a too early rather than a too late period.

THE PRESIDENT remarked that it had been his good fortune to witness the operation of Bergmann described in the paper, in which the gastric fistule made for the relief of a strictured œsophagus was subsequently closed, after the stricture had been sufficiently dilated. It certainly was a unique and remarkable case.

One point in connection with the paper he thought worthy of remark was the omission of continuous dilatation. He had not had any personal experience with cicatricial strictures as tight as Dr. Sands had cited, but he had had some experience in the treatment of quite narrow malignant strictures. Recently, in one instance, a No. 18 soft catheter was kept in position three weeks prior to the death of the patient, and with great comfort and improvement in the size of the strictured portion, though nourishing the patient was, in the case, the only point aimed at. He was led to adopt this method of treatment by reading an article by Krishaber, who had employed continuous indwelling of the catheter for such lengths of time; and in one instance the instrument remained in position for one year without any detrimental result. The comparison with reference to dilatation was often made between the urethra and the œsophagus, but erroneously; for in the former there is present an irritating or septic urine. Dr. Weir thought it had been shown by Krishaber's cases that the œsophagus bears continuous dilatation better than the urethra does; and the food, being carried inside of the tube, cannot produce irritation. He would therefore, in cases of cicatricial contraction, first try the method of dilatation, before resorting to operative procedures.

REMOVAL OF FOREIGN BODIES.

DR. HALSTED presented several foreign bodies with brief histories of the cases from which they were removed.

Case I.—A piece of fibro-cartilage removed from the œsophagus by external œsophagotomy, at Ward's Island. Hungarian, æt. 33, July 23, 1882, swallowed, at his dinner, a piece of food which became arrested in his œsophagus a little below the cricoid cartilage. The resident physicians were unsuccessful in their attempts to remove it with forceps. They obtained, however, a fragment which, submitted to microscopical examination, proved to be fibro-cartilage. Patient is said to have experienced great difficulty in breathing for several hours, and then to have become quite tolerant of the foreign body, but was unable to swallow even liquids.

July 25.—Foreign body indistinctly definable by palpation of neck, is believed to be lodged in œsophagus just above sternum, projecting more to the right side than to the left. An incision, extending from middle of thyroid cartilage to the interclavicular notch of sternum, is made parallel with the anterior border of the sterno-cleido-mastoid muscle. The oblique jugular vein drawn towards median line. Middle thyroid vein, in upper angle of wound, doubly ligated and divided. Common carotid artery crossed by omohyoid muscle rises up into view.

Foreign body readily mapped out through œsophageal walls, and over it is stretched the recurrent laryngeal nerve. An incision one and a quarter inch is made into the œsophagus, parallel with and posterior to the nerve and the foreign body, measuring one and a half by one inch, removed with a vulsellum forceps.

Wound in œsophagus united by sulphurous acid catgut, and the integument by silk sutures. An iodoformized peat dressing applied. A few days later patient was clandestinely served with blackberries, by missionaries to the island, which interfered with union by first intention, but otherwise did not retard his prompt recovery.

Case II.—Three calculi, each with a portion of a soft catheter as a nucleus, removed from the bladder by lateral lithotomy at one operation.

The patient, a Finn about thirty-five years old, had been in the habit of evacuating his paralyzed bladder with a soft catheter. One day the catheter broke off in his bladder, and a piece, believed to be two or three inches long, was left behind. He subsequently regained the power of his bladder, and applied, six or eight months after the mishap, to Ward's Island for relief of painful and frequent micturition. A stone was detected by Thompson's searcher. On consideration of the history it was believed to be advisable to practise the cutting operation. Patient had such a short perineum that a finger introduced into the bladder could ascertain the number and shape of the stones. These were seized so carefully with the forceps as not to be crushed and removed. The patient's convalescence was somewhat protracted because of a cystitis perpetuated by a few fragments which he eventually passed per urethra. Each calculus contains a piece of the catheter, its point being distinctly demonstrable in one of them.

Case III.—A portion of a bullet removed from the diploë and cranial cavity.

Mr. H. W. G., æt. 52, was admitted to Chambers Street Hospital, May 9, 1883, for a self-inflicted pistol-shot wound of the head.

Examination. Small circular scalp wound on right side, two and one-half inches below sagittal suture, and one inch in front of external auditory meatus. Normal reflexes and no paralysis—intellect perfectly clear.

Operation. Crucial incision through scalp. External table depressed, and at bottom of depression a hole one-quarter inch in diameter, and about one inch behind bullet wound in soft parts. A probe passed obliquely backwards through the hole detected the foreign body, which was not visible. Thereupon certain fragments of external table were removed, and the bullet revealed lying between the two tables, and projecting somewhat into the cranial cavity—upon its extraction a slightly depressed fragment of the inner table was withdrawn. The wound was dressed antiseptically, and closed with a continuous catgut suture.

Union took place by first intention throughout, except where the incisions crossed one another, viz., at the point of entrance of the bullet, and here there was a very slight necrosis of the approximated corners of the flaps.

The bullet had split upon the outer table of the parietal bone; one fragment entered the diploë and cranial cavity, as described, and the other passed through a mirror, and was found behind the bureau.

DR. HUTCHISON said that some time ago he presented a urinary calculus to the Society, which had for its nucleus a loop of silver wire. The patient had a urethro-vesical fistule which had been closed with silver wire sutures, and he (Dr. H.) was reported to have stated that a house surgeon who had been directed to remove the sutures, overlooked one, which fell into the bladder and formed the nucleus of the stone. This was an error. Dr. Hutchison said that he had himself removed the sutures, and was responsible for having failed to remove the one which entered the bladder.

CORRESPONDENCE.

THE EXTERNAL USE OF THE OLEATE OF ACONITIA.

To the Editor of THE MEDICAL NEWS.

SIR: Allow me to add some supplementary statements and suggestions to my note on the external use of the oleate of aconitia, in reply to numerous communications direct and by letter. The strength of the solution used was 2 per cent. of the alkaloid, so that one minim contained one-fiftieth of a grain. Great care is requisite in securing a pure salt, and the least superheating in combining with the oleic acid destroys its value. My own preparation was made from the imported Duquesnel's "nitrate of aconitia."

Further, I am in possession of no facts which would lead me to suppose that the drug would be of any, even the slightest, value in cases of *peripheral spasm.* Several of my correspondents have spoken of disappointment following its use in cases of *facial spasm* and a number of cases of *spinal accessory spasm.* All reasoning from known facts would lead me to conclude that such a result would only be obtained in an advanced stage of poisoning by the drug. The sensations of pricking,

formication, and numbness, followed immediately by relief, and felt within six seconds after the application, seem to demonstrate that its therapeutic action in the cases referred to is confined to *terminal sensory filaments*. It is a fact, pregnant with suggestions, that in one case in which it was of most signal service, the pains were induced by a large tumor stretching the right brachial plexus, which was enveloped by a mass of hard inflammatory tissue.

I would suggest the further use of the oleate of aconitia as a relief for the burning pains and hyperæsthesia of *neuritis*, and for the distressing pains in those cases of *cancerous growth* involving nerve-trunks, whether in the spinal canal or out of it; in cases of neuromata, single or multiple, especially the multiple subcutaneous form. It also holds out a very fair prospect of relief for those miserable sufferers from *causalgia* (burning pain) in its aggravated forms, symptomatic of *neuritis*, usually traumatic. Very truly yours,

HOWARD A. KELLY, M.D.

PHILADELPHIA, 249 S. SEVENTEENTH STREET.
January 26, 1884.

SOME RECENT INVESTIGATIONS ON GERMS.

[THE following letter has been received at this office. The author, Herr Riechschwamm, does not belong to our staff of special correspondents, nor is he personally known to us. He signs himself, "First Assistant to Dr. Hahn," but upon reference to the last volume of the *Mittheilungen aus dem Kaiserlichen Gesundheitsamte*, Magdeburg, we do not find his name among the Hülfsarbeiter. These facts, together with the very remarkable results of the investigations he reports, have led us thus to inquire into his trustworthiness. We have felt it incumbent upon us, in publishing his letter, to make this prefatory statement, rather than to withhold information of these latest researches, which are certainly calculated to arrest our attention, even if they do not immediately commend themselves to our unreserved acceptance.—ED.]

MAGDEBURG, January 31, 1884.

To the Editor of THE MEDICAL NEWS.

SIR: I have thought that some account of the recent discoveries in regard to bacilli might interest readers who are remote from the great radiating centres of constructive science. The latest of these discoveries is even yet spoken of here with caution, but by the time you have printed this, it will have revolutionized one branch of physiology, and produced an evolution of novel ideas, the final results of which not the boldest can predict. But before outlining for your readers a discovery which I am privileged to communicate by permission of Professor Coccischlächter, and before it has been fully published at home, it may be well to describe the Krankheitenursprungsanstalts — Museum of Bacilli — collected by the Herr Oberprofessor Keimerzeurger von Verdammtnarrburg.

This has been done at the cost of more than one life upon the altar of science. The museum is a room about thirty feet square, with double walls of glass, between which circulates water kept at a temperature of 30° C. by three gigantic thermostats, which are so accurate that the heat does not vary the one-fifteenth of a degree. Ranged along the sides, exposed to air or under glasses, are hundreds of half potatoes, on which grow various bacilli; of late, however, boiled cabbage is said by Keimerzeurger to answer better. Certain specific cocci flourish on the Beta altissima or mangel wurzel, but as to this choice of cultur gartens more is to be said. To walk through this museum with the Herr Professor Keimerzeurger is interesting. Before entering, a mask is given you, and a bottle of condensed oxygen, so as to enable you not to inhale the atmosphere loaded with germs. In tones muffled by the need to speak within the mouth-piece, you learn that to the left is a tubercular potato, its surface gray with the potencies of countless deaths. Near it the bacillus of gonorrhœa flourishes on the cut surface of the succulent beet, beside the ruddy germs of syphilis. Scarlet fever infests this potato, diphtheria that. The new bacteria of pneumonia flourishes on a boiled watermelon; and glanders, cholera, smallpox, and hydrophobia spread in tiny greenish growths over the little gardens of gelatine. For a moment, in my interest, I displaced my mask. The professor instantly seized me and hurried me from the room. "What a risk!" he said; "my last assistant did as you did, and died in seven days of acute phthisis, with symptoms of hydrophobia and whooping-cough, combined in horrible equality." I did not desire to reënter this box of Pandora. In adjoining apartments of less size are the experimental cultivations, those which are still in doubt. Among the most interesting is the micrococcus of gout, found to flourish best upon gelatinized turtle soup.

A most striking practical result has grown out of some of Coccischlächter's and Keimerzeurger's later researches. They have been able to show that the bacterium of colic flourishes on the green apple, which accounts for the gripes experienced by youthful gourmands. But far more remarkable is the fact that certain micrococci and bacteria die, as proved by Coccischlächter, in some culture materials, and thrive, as shown by Keimerzeurger, on others. Thus the tubercle bacilli flourish on boiled cabbage (Keimerzeurger), but perish on moist sauer-kraut (Coccischlächter), so that by a persistent diet of the latter article they have been able to saturate some of their devoted assistants up to the point of insusceptibility, a discovery which will, we trust, put an end to the cavils at the failure of these researches to yield practical results.

Most startling of all is Herr Keimerzeurger's latest result. He has been able to show that the inconvenient monthly sickness known as the menstrual flow is a non-essential of female life, and is due to a peculiar bacillary growth. It is at once and for many months destroyed by the growth of the bacterium virilis, long misapprehended as the spermatozooid. This latest discovery has been received with derision in France, but Hahn has given it his support, and in my next I shall report his confirmatory experiments. RIECHSCHWAMM,

First Assistant to Dr. Hahn.

NEWS ITEMS.

PORTLAND, MAINE.

(From our Special Correspondent.)

ALUMNI ASSOCIATION OF THE GRADUATES OF THE MAINE MEDICAL SCHOOL.—For some months past there has been a growing sentiment among the graduates of

the Medical School of Maine in favor of the organization of an association, to renew old associations and advance the interests of medical education in this State. January 30th, some twenty or more, from all sections of the State, met at Waterville, and organized under the name of the "Bowdoin Medical Alumni Association." A constitution was adopted and officers elected. Any person on whom a medical degree has been conferred by Bowdoin College is eligible to membership on paying the required fee, provided that his character and professional standing be satisfactory to the executive committee. Officers are to be elected at the annual meeting, which will occur during the week of the close of the school at Brunswick. Expenses are to be met by assessments, but no money of the Association can be used to pay for refreshments, a clause which may be a good test of future interest in the Association on the part of members.

Officers were elected as follows:

President.—Frederick C. Thayer, M.D., of Waterville, Class of 1867.

First Vice-President.—Sumner Laughton, M.D., of Bangor, Class of 1834.

Second Vice-President.—R. D. Bibber, M.D., of Bath, Class of 1871.

Secretary and Necrologist.—Charles D. Smith, M.D., of Portland, Class of 1879.

Treasurer.—Frederick H. Gerrish, M.D., of Portland, Class of 1869.

The next meeting will be held at Brunswick during the last week in May next. A banquet will be served, and an address delivered by Dr. A. J. Fuller, of Bath, Class of 1841.

Much enthusiasm was manifested by those present. Many were present from distant parts of the State, the eldest, Dr. S. M. Bradbury, of the Class of 1831, travelling the greatest distance. Dr. Thayer, of Waterville, reported that circular letters had been sent to nearly four hundred graduates, and replies expressing interest and coöperation in the movement received from a very large proportion of this number. The friends of the School see in this movement renewed efforts to keep up its present good name, and the indications of hearty aid and support in definite shape from the physicians it has educated during its sixty odd years of existence.

MONTREAL.

(From our Special Correspondent.)

Doctors at Law.—The case of Dr. Severin Lachapelle *versus* Dr. F. W. Campbell *et al.*, at present before the Superior Court in this city, is exciting a good deal of interest in the profession. About two years ago an editorial appeared in *L'Union Medicale*, entitled "Fiat lux," in which it was stated that some four or five French Canadian medical students had received a private examination from the faculty of one of the medical schools of Montreal, and had received certificates which would be accepted in the United States. This, of course, is contrary to the law of the Province, which places the supervision of the college examinations in the Provincial Medical Board, which body appoints assessors to be present at, and who report on the character of, the examinations. In the editorial enough was said to make the members of the Medical Faculty of Bishops College feel that their institution was referred to; and a criminal action for libel was brought against the proprietors of *L'Union Medicale*. The Grand Jury threw out the bill, and the present action is brought by the editors of that journal against Dr. Campbell and other members of his school for damages alleged to have been sustained by bringing a criminal action against them.

There can be no doubt that the editors of *L'Union Medicale* did not exceed their normal privileges in the editorial "Fiat lux," believing, as they did, in the genuineness of the certificates possessed by the young men, which were signed by Dr. F. W. Campbell as Registrar of the Bishops College School. But it appears that none of the members of this school know anything of such a private examination, and the certificates are believed to be forgeries. If this is the case, it is a great pity that the matter could not be amicably arranged, as both parties have been the victims of a fraud. Some advantage may come of it, if the perpetrators of the forgery can be discovered and punished.

Preliminary Education.—At the last meeting of the Board of Governors of the College of Physicians and Surgeons of Quebec (the Provincial Board), a committee was appointed to confer with the heads of schools and colleges, to arrange, if possible, that the young men presenting themselves for the preliminary examination for permission to enter upon the study of medicine, should be better prepared, and to discuss the causes of the wholesale rejections which have taken place during the past two years. An important conference on the subject took place on the 24th, and the matter was fully discussed. The general opinion was that the examination was not too stringent, but that in certain branches the French students, and in others the English students, were not sufficiently grounded, and it was agreed that for the future greater attention should be paid to these subjects.

The British Association for the Advancement of Science.—The list of members who have signified their intention of coming out to the Montreal meeting has been received. It includes the names of nearly sixty medical men, among whom are some of the most distinguished members of the profession in Great Britain. Bastian and Schäfer, of University College, London; Struthers and Stirling, of Aberdeen; Foster and MacAlister, of Cambridge; McKendrick, of Glasgow; Morely, of Oxford; A. Milnes Marshall, of Owens College; Cheadle, Pye-Smith, Protheroe Smith, Heywood Smith, W. B. Carpenter, George Harley, Arthur Durham, William Wood, and F. J. Mouat, of London; Lawson Tait, of Birmingham, and many others are expected.

The Canada Medical Association meets in August, in Montreal, a few days before the British Association, and it is hoped that a number of these gentlemen will be present.

Yellow Fever Notes.—Sanitary Inspector Burgess, stationed at Havana, reports four hundred and eighty-two deaths from all causes during the month of January, thirty of which were from yellow fever, six from typhoid fever, nine from pernicious fever, and two from diphtheria. Of those who died from yellow fever, twenty-

five were among the shipping and private individuals in the city, the remaining five among the army and navy.

During the same month last year there were fourteen deaths from yellow fever. An absence of hurricanes and high winds is noted.

His weekly reports show that he disinfects all vessels taking on or discharging cargoes at suspicious wharves, if bound to any port in the United States south of Hatteras.

Reports from Rio de Janiero state that smallpox is more fatal just now than yellow fever. For the two weeks ending January 5th there were eighteen deaths from smallpox, and but fourteen from yellow fever.

THE PUBLIC HEALTH COMMITTEE OF THE HOUSE.—At the last meeting of the Public Health Committee of the House of Representatives, the Secretary of the National Board of Health made a wordy personal attack upon the Surgeon-General of the Marine-Hospital Service, and the Executive Committee of the National Board apparently concurred in his charge that Surgeon-General Hamilton had been "injudicious, unskilful, and unsuccessful in his quarantine work," and that "in his efforts to control public and official opinion he had been guilty of misrepresentation."

Surgeon-General Hamilton, not having been invited to appear before the Committee, was not present, but we are informed that he will claim the right to a hearing, to justify the action of the Marine-Hospital Service.

CHOLERA.—Fifty-four deaths from cholera occurred at Calcutta during the two weeks ending December 15, 1883.

VIVISECTION IN GERMANY.—The *Deutsche med. Wochenschrift* for December 19th announces that the Prussian Government, in anticipation of the renewal of the discussion on the question of limiting the practice of vivisection, which is to take place during the present session of the Parliament, has issued a circular to the medical faculties of all the Prussian universities, requesting a statement of their opinions on the question. This calls to mind the fact that on the occasion of the interpellation which took place last session, a distinguished physiologist resolved to exhibit to the ministry, in a striking and graphic manner, the relation which vivisection bears to the progress of physiology. Taking the last edition of *Hermann's Manual*, he scored all the well-founded facts which could never have been firmly established without the aid of vivisection. When he had done with the book, it very much resembled in appearance a liberal political journal which had been submitted, in the worst times, to a Russian censor—the passages struck out, exceeding in number those that were allowed to remain in.—*Med. Times and Gazette*, January 19, 1884.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending February 2, 1884, indicate that consumption, erysipelas, and remittent fever have increased, and that diarrhœa, intermittent fever, typhoid fever, and typho-malarial fever have decreased in area of prevalence.

Compared with the average for the month of January in the preceding six years, neuralgia was more prevalent, and diphtheria, rheumatism, typho-malarial fever, bronchitis, scarlet fever, consumption, pneumonia, and remittent fever were less prevalent in January, 1884.

Including reports by regular observers and others, diphtheria was reported present during the week ending February 2, and since, at eighteen places, scarlet fever at thirteen places, and measles at seven places.

NOTES AND QUERIES.

AIR IN THE VEINS AS A CAUSE OF SUDDEN DEATH AFTER LABOR.

To the Editor of THE MEDICAL NEWS.

SIR: In THE MEDICAL NEWS of November 10, 1883, is an editorial entitled, "Air in the Veins as a Cause of Sudden Death in Puerperal Women." It having been my misfortune to attend a young lady a short time previously, whose sudden death had created a gloom and cast a shadow over the community by whom she was universally beloved, and not being able to offer any satisfactory explanation of the causes of her death until I read the article alluded to, I have thought a short description of the case might prove of interest to some of your readers.

This young lady had been under my care from the beginning of her pregnancy, and there had been nothing unusual or any symptom to indicate any untoward termination of the pregnancy. Her general health had been good, her figure, as far as I could judge externally, was perfect, and there was no reason to anticipate the disastrous result. I was called to her about two o'clock on the morning of the 29th of August, and upon examination found the bag of waters unbroken, and the labor proceeding as naturally as possible. The membranes were ruptured after they had done their part, and the child was born about five o'clock A. M. The placenta was not retained more than a half hour, and was thrown off under the influence of ergot, which contracted the uterus firmly.

Three-quarters of an hour afterwards, whilst I was superintending the dressing of the child, the mother called to me, and said she felt very faint and badly. Immediately the idea of hemorrhage occurred to me, and I placed my hand upon the uterus, which, to my surprise, I found firmly contracted, so that there could be no hemorrhage, and upon vaginal examination could detect none. Upon removing the pillows, and administering stimulants, she apparently revived, and said she felt better. In the course of a half hour the same thing recurred, and although I administered stimulants freely, both hypodermatically and by the mouth, she did not revive, but gradually sank, her pulse becoming weaker and weaker, her breathing more and more oppressed, the lividity of countenance increasing gradually as the heart failed, until, eventually, about half past nine o'clock, she sank, unconsciously and peacefully, into the arms of Death—apparently as if some power had been controlling and compressing the heart until it could no longer act, but quietly ceased to struggle. There were no convulsions, no hemorrhage except that which is met with in every case of labor, but only a gradual cessation of the impulse of the heart.

I could arrive at no definite conclusion as to the cause of death, and was unable to answer the question when asked me, "Why she had died?" I was aware of Dr. Meigs's "Heart-clot Theory," and also of the symptoms of thrombosis; but, as you state in your editorial, "these are causes of rapid, rather sudden death," and I could not satisfy myself that those causes entered into the case; in fact, until I read your article, I was at a loss. Since reading it, I feel confident that the condition you describe is the explanation of the death; and I write this in the hope that it may be of assistance to some one similarly circumstanced. I have been particular in describing the symptoms, so that it may be easier to recognize the trouble, even if we are unable to render any assistance.

Yours respectfully,

R. B. HANAHAN, M.D.

WINNSBORO, S. C., February 5, 1884.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 4 TO FEBRUARY 11, 1884.

BARNETT, RICHARDS, *Captain and Assistant Surgeon.*—Granted leave of absence for six months on account of disability. —*Par. 8, S. O. 13, A. G. O.*, January 16, 1884.

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIV. SATURDAY, FEBRUARY 23, 1884. NO. 8.

ORIGINAL LECTURES.

ON DISEASE OF THE KNEE-JOINT.

A Clinical Lecture
Delivered at the Bellevue Hospital Medical College, New York.

BY LEWIS A. SAYRE, M.D.,
PROFESSOR OF ORTHOPEDIC SURGERY IN THE COLLEGE

(Reported by Edward Develin, M.D.)

GENTLEMEN: This morning I desire to call your attention to disease of the knee-joint. There are, in all, fourteen ligaments connected with this joint—your Professor of Anatomy having doubtless demonstrated the same to you. The bony structures assisting in the formation of the joint are the femur, tibia, and fibula, together with the patella—the whole being lined by a synovial membrane.

We shall first take up synovitis. This can be caused by constitutional affections alone, as gonorrhœa, rheumatism, etc.; or it may be induced locally by a blow, wrench, or cold. If it is acute, and the joint filled with fluid, and the patella elevated, giving fluctuation, by percussion you can get a click of this bone upon the femur, as a rule. If, however, the effusion is not very great, you will fail to get this click; but you will be enabled to detect the peculiar fluctuating feeling upon either side of the patella. You will remember that under the patella there is a bursa, and another under the tendon of the quadriceps muscle above the patella, and yet another external to the patella. These I specially call your attention to, as they are of vast importance and significance: for you may mistake a disease of these bursæ for disease of the knee-joint itself. Between the bursæ and the knee-joint we find quite a mass of fat. It is, however, well to remember that disease of these bursæ may also involve the knee-joint.

Now, in synovitis of the knee-joint resulting from constitutional causes, if it be from rheumatism, as a matter of course you diagnosticate the case from the manner in which the pain changes from place to place. But you must also think that, perhaps, in addition to the synovitis, you may have an osteitis, this being caused by a sudden wrench, strain, or concussion; more generally the concussion will cause an extravasation of blood into the cancellous tissue lying just beneath the encrusting cartilage of the femur or tibia, or into the patella. This injury may appear but slight at the time, and cause the patient no great pain, and even if examined by a medical man may not be correctly diagnosticated. But if this apparently slight injury be not correctly diagnosticated, and the proper treatment be neglected, it will in time lead on to serious disintegration of the bone substance; a low grade of inflammation being set up, and pus formed, which slowly burrows into the joint, the encrusting cartilage becoming involved, leads on to necrosis; ulceration of the cartilage taking place because of its low grade of vitality, and soon the true bony structures come into contact, being denuded of their cartilage by the disease; there appearing at the same time a fungous exudation from the synovial membrane lining the joint, and which hence becomes rough and granular, the membrane being changed from its smooth, shining surface, and we have what is called gelatiniform degeneration of the joint.

This condition, which I have endeavored to explain to you, is simply the result of long-continued inflammatory action, and, as a rule, from some *slight* accident. If the injury caused acute inflammation at the time, it would have been noticed at once, and appropriate treatment applied. But in those slight injuries which pass unnoticed at the time, and months elapse before the real symptoms set in, this slight injury, occurring long before, is overlooked or forgotten, and the disease is pronounced then to be white swelling, there being no redness about the joint. And yet, for the reason that there is so much constitutional disturbance accompanying this swelling, the disease has been almost universally looked upon as of constitutional origin; whereas, in the great majority of cases, it is the result of a direct injury to the parts diseased; and the long-continued action, together with the slow inflammation, is what has produced this constitutional disturbance, and leads the physician into the belief that the disease is dependent upon some constitutional dyscrasia alone. There is no doubt that a constitutional dyscrasia *may* be inherited from the parents; you can also create a disease by bad hygiene, which, sooner or later, may bring about a strumous condition; and when you have reached this condition, no matter whether inherited or acquired, a very slight injury will start degenerative action very rapidly; much more rapidly than if the health of the patient were in a normal condition—as in the normal condition the system has more recuperative and resisting power than when diseased.

Now, I do not wish you to misunderstand me on this point; but I will distinctly state that in persons laboring under this strumous diathesis, whether inherited or acquired, some local effect is necessary to start the disease. In constitutional diseases, they are diseased all over; then why should the disease manifest itself at one particular point more than another? Simply because it is a traumatism that has produced this external manifestation of the disease at this point.

The tendency of this inflammatory action is to produce an effusion into the joint, which causes a certain and characteristic distortion of the joint. Thus, in disease of the knee-joint, we find the limb partially flexed at the knee, because by this flexion of the limb the capsular ligament becomes relaxed, and the joint-cavity can then contain more fluid, and thus relieve the diseased parts from pressure. The same explanation is equally applicable to disease of the hip-joint; the limb is flexed in order to distend the joint capsule and accommodate the increasing effusion. In the course of time the muscles themselves begin to contract, owing to reflex irritability, and these in turn draw the diseased

surfaces of the bone together, and thus diminish the amount of blood to the parts pressed upon, and therefore interferes with the nutrition of these parts, resulting in severe and extensive ulceration from this lack of vitality of the part. You can, then, readily understand how this pressure adds to the torture of the patient, besides inducing a more rapid disintegration of the parts pressed upon.

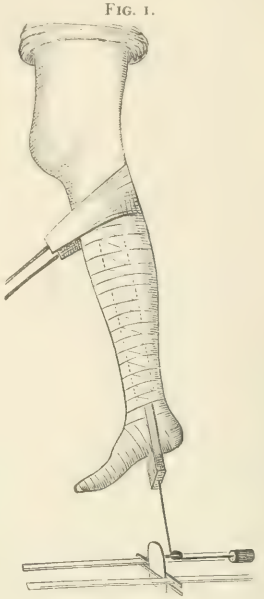
In the knee-joint, then, we have this flexion and outrotation of the leg, the biceps muscle constantly acting upon one point only, keeps up this continued pressure upon the outer condyle of the femur. For this reason the leg is rotated outward. On the inner side of the leg we have the insertion of the sartorious, semi-tendinosus, semi-membranosus, and gracilis muscles, which act against the biceps alone on the external surface of the leg; these four muscles having different points of insertion, do not maintain their traction at one particular point; there is no continued pressure upon the articular surfaces at one point at all times; thus the inflammatory action is more tardy at the internal aspect of the joint; whereas the biceps, acting upon one point alone, allows of no relief from pressure, and thus does more damage than the other four muscles combined. This is the reason of the peculiar deformity accompanying disease of the knee-joint.

If, in connection with this diseased condition of the joint, you have constitutional disturbance—torpor of the bowels, or affection of the kidneys, etc.—it is necessary to give this condition the requisite treatment; but do not pin your faith to any so-called specifics, for there is no remedy on the face of the earth which will take the place of fresh air and good nourishing diet in this class of cases. The local treatment, however, is of the most vital importance, and if you omit that, your patient will never recover with a good and useful joint. The general treatment, independent of the local treatment, is not sufficient. You must, therefore, apply some means to overcome that distortion, by the use of traction in the required direction to correct that deformity and relieve that pressure. In these diseases of the knee-joint, you will find your patient sitting, holding his leg, until he becomes worn out by the constant effort of keeping it in one position, in order to prevent attrition of the diseased surfaces. In your treatment of this disease, if you simply lock the knee up, you will make a failure; you must have *extension* with it, or the contracted condition of the muscles will add to the progress of the disease. In contradiction of the statement I have just made, I will quote from the twentieth annual report of the New York Society for the Relief of the Ruptured and Crippled. "Weights and pulleys to extend diseased limbs are never used in this hospital, as we believe them to be mere palliatives in treatment, and often injurious."

There is no need for me to make any lengthy comment on such a statement, and the results arising from this plan of treatment in diseased joints, as the large number of cases which have been presented at our clinics for treatment, after being under treatment for months at the above hospital, have fully proved the fallacy of such a statement in relation to the proper method of treatment of diseases of the joints.

In disease of the knee-joint where the leg has become flexed, you will first require extension made in two directions, one upward and the other parallel with the long axis of the limb (see Fig. 1). If I attempt to straighten a limb in this position by parallel extension only, I simply add to the pain; but by securing the limb with extension in the *two* directions, namely, in

FIG. 1.



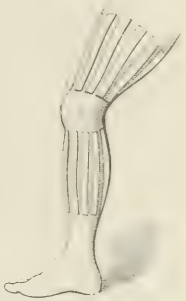
the line of the deformity, I afford instant relief. If you can place the parts in such a position as to afford relief, that is all there is for you to do; but you must carry out that plan. Sometimes it may be necessary to apply heat or cold. You may think that somewhat strange, but it is a fact; neither can I tell you which to apply, or when to apply it; you have to judge by the feelings of the patient, and apply that which affords most relief. In one case you may apply ice with great effect; if this, however, causes pain, relief may be derived from heat in all probability. Now, if there is but very little swelling in the joint, but intense pain over the coronary ligaments, then you can apply the hot iron over these ligaments and allow the wound to cicatrize; but under no circumstances get up a suppurating sore. You may, perhaps, need to apply a blister, and when the blister is raised, just let out the exudate, but do not take off the skin or you will be liable to have a suppurating sore also. After letting out the fluid, you cover the part with a piece of oiled rag. This is the only proper way to apply blisters; the actual cautery, however, you will find most efficient in these cases.

After you have, by means of your traction, brought the leg almost straight, you can then apply the knee-splint, which I here show you (see Fig. 2). In preparing the limb for the application of this instrument, cleanse it thoroughly in order to remove all particles of exudate which would prevent the adhesion of the plaster, which I now intend to show you how to apply. In the appli-

cation of any kind of splint in which adhesive plaster is used, I prefer to use Maws's or Shivers's moleskin plaster, which I here show you, and which can be procured from Messrs. Hunt & Dunlap, 1218 Broadway. In

FIG. 2.

FIG. 3.



applying this knee-extension splint, I cut inch-strips of plaster, as you now see, which are long enough to pass from just above the knee to the upper third of the thigh, and allow sufficient to reverse over the collar of the splint. I now pass more strips from just below the knee to a little above the ankle, and in like manner allow of reversing over the bottom collar of the instrument. We now have the plasters adjusted, leaving the knee exposed (see Fig. 3).[1] My assistant now holding the limb and plasters in position, I take a roller-bandage and bind very firmly around the limb, and then, with my hand, by rubbing, I firmly secure the plaster to the skin; and now, as I remove this tight bandage, you see they remain in their place without my assistant holding them, and he is at liberty to assist me in other ways.

I now take a roller-bandage, and place permanently around the leg, to retain the plasters in position; then I secure those upon the thigh in the same manner, still leaving the knee exposed, you will oberve. I am now ready to apply the splint. First, I secure the lower collar—by means of the key I regulate the size as may be required, to prevent strangulation of the circulation; then, reversing the ends of the adhesive plaster over the collar of the instrument, you notice I secure them in that position by passing a strip of adhesive plaster around the leg directly over the collar of the instrument. Having thus secured them, I now continue with my roller-bandage over the collar of the instrument and under the extension-rods around the leg, and over the reversed ends of the adhesive plaster. In this manner we have secured the lower part of the splint, and will now turn our attention to the upper part of the same. I desire specially to call your attention to this collar, inasmuch as it allows of motion upon the rods of the splint; whereas, in the lower collar of the instrument, you noticed that it was perfectly immovable and could not possibly be moved upon the rods, as in this upper collar. If, now, both of these collars were movable, you could not retain the leg in any one position, for the simple reason that the collars would tilt upon themselves, and thus, while the upper edge of the lower collar and the lower edge of the upper collar would press in upon the leg and cause excoriations, your extension would be lost and the joint surfaces brought together, and the disease within the joint, instead of diminishing, would increase. I mention this the more especially as it is but a few weeks ago that a child was brought to my office wearing an extension knee-splint, in which both collars were movable, and which was made by Tiemann & Co. The physician who brought the child to me came from Canada; he told me that he wrote for my splint, and received such a one in return. Now, I wish to be distinctly understood upon this point, and cannot impress upon you too strongly the necessity of one collar being firmly fixed and immovable upon the extension-rods, for it is only those that I use; the other, in which the two collars are movable, is perfectly useless, and is not my splint. The same thing has occurred to me in the splint made by Shepard & Dudley. The splint which I here show you is made for me by Reynders & Co., 303 Fourth avenue.

Having now secured both upper and lower collars in a similar manner, still leaving the knee exposed (see Fig. 4), I now take my key and make the requisite extension, which will be when my patient tells me he is free from pain. You will notice that, while doing this, my hand is under the upper third of the leg, pressing upwards. This is to prevent the anterior surfaces of the joint from being brought together while I am making extension. Having now secured the requisite extension, and the patient being free from all pain, we shall endeavor to secure the absorption of the effusion around the joint, and for this purpose I now take some strips of adhesive plaster about an inch wide, and bind them firmly around the joint, leaving no place uncovered; by this means I secure an equal pressure all over the joint surface. Having accomplished this, I now pass a roller-bandage around the joint over the plaster, and thus retain them in position (see Fig. 5). Anyone

FIG. 4.

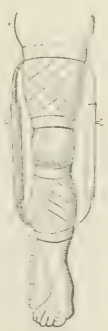


FIG. 5.

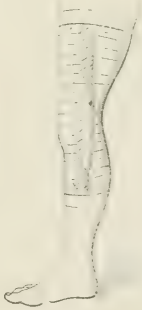
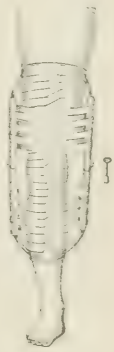


FIG. 6.



looking at that leg now, would perhaps suppose that was the end of the dressing; and I regret to say that I have seen some students who manifested so little interest in

[1] The strips of plaster on both thigh and leg should be longer than they are represented in this cut.

the pursuit of their studies, and although, perhaps, wishing to see the instrument applied, would rush from the lecture-room because it was almost the close of the hour, and think they had seen enough to warrant them to apply the instrument if they should ever be called upon to do so; whereas, by this very thoughtlessness and carelessness, they lost one of the most important points in the application of this knee-extension splint; and perhaps by this very carelessness, when an opportunity offered, would ruin both their own reputation and the leg of the patient. I therefore desire you specially to observe this last and final application of the bandage, and make careful notes of the manner in which I apply it. You will notice that, having now bandaged the knee, I carry my roller up the thigh, passing it over the thigh in front and under the rods of the instrument, bringing it in front of the thigh only—not behind at all. By this means I press the femur back and assist in straightening the limb. Having done this, I now pass my roller down below the knee, but instead of passing it in front of the leg, as I did with the thigh, I pass it behind the leg and over the front of the rods of the splint, thus forming a cradle for the leg and still further straightening the limb. This last bandage, you will notice, takes the place of my hand, which I just now drew your attention to, as pushing the tibia forward to prevent any pressure upon the anterior surface of the joint (see Fig. 6).

You have now seen the complete application of the extension splint in disease of the knee-joint. But, supposing that your patient is very heavy, I should advise the use of a pair of crutches in addition, as the weight of the patient may cause the adhesive plaster to slip, and thus necessitate constant reapplication of the splint. If, however, it is a child, there will in all probability be no need for the use of the crutches, and it can run about with the splint as you have just seen it applied.

Case I.—This boy, whom I now present to you, was brought to me some time since suffering from disease of the knee-joint. He was then nine years of age, and out of a family of nine children the only one who is in any way failing in health. He was strong and healthy until he was four years old, when, I am informed by his mother, he was supposed to have had some trouble with his kidneys, and shortly after he was attacked with otitis of both ears, ending in perforation of the drum, with more or less discharge up to the present time. You have all observed that, in addressing him, he is compelled to use an ear-trumpet.

Some four years ago a swelling was observed upon the inside of the right knee after exercising. He was taken to a distinguished surgeon of Philadelphia, who, the mother stated, advised massage and gentle motion. Failing to get relief under the treatment, and the swelling still increasing, another eminent surgeon was then consulted, he giving his opinion that it was white swelling, and advised a course of constitutional treatment with the external application of iodine, no mechanical treatment at that time being advised. The leg becoming flexed, the attending surgeon afterwards ordered an instrument for the purpose of bringing the leg straight; but the *main feature* required was lacking in the instrument, there being *no extension* made with the endeavor to straighten the limb. No relief being obtained by the constitutional treatment, or the mechanical appliance, after two years of this method of treatment, and the disease still increasing, the attending surgeon then advised amputation of the limb. Before consenting to this, however, the father decided to bring the boy to me. At the time that I saw him the knee had lost all its contour; there was a large abscess over the joint, fluctuation extending two-thirds up the thigh. On the inside of the inner condyle was a sinus, into which a probe could be passed through the joint, emerging at the upper portion of the tibia. The leg was flexed at an angle of forty-five degrees, and the least motion caused intense pain. The measurement being taken over the patella, gave eleven inches against eight and a half inches around the sound limb; below the patella, the diseased limb measured ten and one-eighth inches against eight inches below the patella of the sound limb, the muscles of the calf of the diseased limb being greatly reduced in size, owing to disuse. Upon making traction upon the leg in the line of the deformity, *e. g.*, in the two directions, as is my usual custom in disease of the knee-joint when the limb has become greatly flexed (see Fig. 1), immediate relief was obtained. I therefore determined to delay amputation until he had had the advantage of my plan of treatment, and at once ordered him to be placed in bed and extension made in the two directions, previously making a free opening into the joint, passing a rubber drainage-tube through the knee from the inner condyle to the outer portion of the tibia, and another one from above the knee and aspirating the abscess at the thigh; these operations being performed antiseptically, the joint being tightly strapped and the limb carefully bandaged. The extension was maintained for six weeks, until the limb had been brought sufficiently straight, so that the extension knee-splint could be applied in the manner already described. This has been reapplied from time to time, as occasion has required, and extension made within the limits of prudence, until, as you see, the leg has been brought almost straight.

He comes to me now able to walk upon the leg without pain or discomfort, the sinuses having since closed. The result is much better than I could dare anticipate; but I am in hopes of securing still better results, as I shall presently show you.

I refused to operate when he was brought to me, as he was in such a miserable condition that there seemed very little hope for his life if amputation were performed. I thought then it would be an excellent recovery if he could be cured with ankylosis. I now find the patella quite firmly attached, but by using a little force I can secure slight movement, although it causes considerable pain. Now, by bearing down upon the leg, I can bring the limb almost to a straight line, and having secured such a condition of things, I feel inclined to do more than to let him go with the limb in its present position. I certainly see no reason why it should not terminate in a movable joint.

You see that I move the tibia on the femur easily enough, but the patella does not move at all. If I can succeed in loosening the patella, I am quite certain that something can be done by developing the quadriceps muscle. This is a lesson of practical value, and I hope you will see the importance of the continuance of further treatment; although, in this case now before you, we have a most satisfactory and remarkable recovery. I

have ordered an instrument to be made by which the leg will be thrown forward. The principle is to carry your treatment up to the point of endurance, but not to a point of exciting fresh inflammatory action. Remember, that if by your passive movements and massage you create heat and pain in the joint, and they have not disappeared on the following day, then you have carried it to excess, and should, therefore, give the joint perfect rest, with the application of cold water, until all inflammatory action has passed away.

Now, I desire you to understand the importance of motion and massage at the proper time. During the active progress of the disease, *rest, rest, rest,* is the essential element of the treatment, and at the same time extension sufficient to prevent pressure of the diseased surfaces against each other, induced by reflex muscular contraction. But when the inflammation has subsided, and all morbid action has disappeared, then passive motion may be instituted for the purpose of preventing ankylosis.

If you understand the principles of this, you will have no difficulty in these cases of ankylosis; and remember that you have no right to stop until you have secured all that is attainable.

Note (nine months after).—There is now excellent motion in the joint, the patient being able voluntarily to extend the leg to almost a straight line; and can flex the knee to a right angle. He can now run around with ease, and this winter has skated with his companions.

Case II.—This man, aged forty-two years, comes here from Nebraska suffering from what is sometimes called hydrarthrosis. You will notice how immensely this left knee-joint is swollen. Upon taking the measurements we find its circumference to be: Above the patella, twenty inches; at the upper edge of the patella, twenty-one and one-half inches; at the lower edge of the patella, eighteen and one-quarter inches. The measurements of the knee of the sound leg are: Above the patella, thirteen and three-quarters inches; at the upper edge of the patella, thirteen and one-half inches; at the lower edge of the patella, thirteen inches. You observe that he can flex the leg perfectly and extend it almost to a straight position, and can also walk upon it. He states that he has been to the Hot Springs, and to one of the hospitals in St. Louis, and has had numberless applications to the knee, but to no avail. He had the knee aspirated twice in St. Louis, a quart of fluid being removed on each occasion, he states; this, however, I think is doubtful.

He tells me that previous to this difficulty, while carrying a pail out with feed for his hogs, he slipped and fell, striking the side of the knee violently, since which time the knee has gradually assumed its present proportions. The difficulty in this case is that while able to walk upon the limb, he can never be sure of it supporting him, as without a moment's warning it gives way and throws him to the ground.

On examination I find that the external condyle has been fractured off, and as you here see, I can take the whole piece in my fingers and slide it up and down as I wish; while if I take hold of the internal condyle and attempt to make motion, I move the whole thigh. We have, therefore, an ununited fracture of the external condyle with this enormous swelling of the joint. Now what can we do here? The only way is to have some artificial support for the limb, to prevent the man from having these sudden falls. This support must be designed to keep the leg in position, so that when the weight of the body is brought upon the leg it cannot be thrown off its point of bearing. Mechanical means is the only treatment which can be of advantage in these cases.

ORIGINAL ARTICLES.

NOTE ON THE USE OF HYDROBROMIC ACID IN EPILEPSY.

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THE researches of Dr. Reichert in the physiological laboratory long since showed that hydrobromic acid is so nearly equivalent to the bromide of potassium, that it ought to be able to replace the salt to a considerable extent in practical medicine, as being more agreeable to the taste, and not having any potash in it to increase unnecessarily the depression of the circulation and disturb the general nutrition.

Nevertheless, the verdict of those neurologists who have used hydrobromic acid has been strongly against it, and my own earlier experience coincided with this. Thinking over the matter, it occurred to me, that this negative result had been caused by the failure to use the remedy in sufficient amount. One or two teaspoonfuls of a three per cent. solution (Fothergill's formula) seems to have been a common dose.

The acidum hydrobromicum dilutum of the United States Pharmacopœia is a ten per cent. solution, yet one drachm of it is only equivalent in bromine strength to nine grains of the potash salt. A teaspoonful of Fothergill's solution represents scarcely three grains of the bromide. It is plain, therefore, that much larger doses of the acid should be employed.

In my ward at the Philadelphia Hospital there are twelve cases of old, severe, essential epilepsy, which from August 13, 1883, to September 15th, were taking each seventy-five grains daily of the bromide of sodium, and in most of which the acne and other evidences of bromism were very pronounced. During the thirty-three days these twelve patients had two hundred and twenty-seven fits. Of these fits one hundred and thirty-two occurred during three days in one patient, and probably should be deducted, for the purposes of comparison, leaving ninety-five as the number. The patients were then left fifteen days without medicine, were then given a half fluidounce of the officinal hydrobromic acid three times a day for twenty-three days; after this the dose was increased to six fluidrachms for six days; then to one ounce for forty-three days. After this, for sixty-two days, they were given each ninety grains of the bromide of potassium daily. The results are expressed in the following table.

The smaller number of fits in the first entry of the second column is obtained by deducting from

the whole number the many fits occurring during three days of epileptic status in one person.

Medicine. Daily Dose	Number Days.	Number of Fits.	Averages number of fits occurring in the 12 patients conjointly, per day.
Bromide of sodium, 75 grains.	33	227 (or 951)	6.9 (or 2.9
No medicine.	15	241	10.1
Acidum hydrobromicum dilutum, f℥iss.	23	81	3.5
Ibid. f℥ijf℥ij.	6	12	2.0
Ibid. f℥iij.	43	79	1.8
Bromide of potassium, 90 grains.	62	132	2.2

It will be seen that the effect of the acid in reducing the number of fits was directly proportionate to the dose, and was very pronounced. When three fluidounces were given daily, the number of fits was reduced to about one-tenth of those which occurred when no remedy was administered: whether the great number of fits which happened during three days of epileptic status is deducted or not from the roll of the sodium bromide, the effect of the acid was much greater than that of the seventy-five grains of the salt.

Even the largest dose of the acid was better borne than were the seventy-five grains of the bromide of sodium. The eruption of acne was much less universal, and when present much less severe, whilst the peculiar apathetic countenance of bromism was entirely wanting, although it had been very distinct in several of the cases whilst the salt was being administered. The effect of a daily dose of ninety grains of the bromide of potassium upon the recurrence of the convulsions was not as great as that of the full doses of the acid, but the bromism produced was distinctly more severe.

The acid was given after meals, with an equal amount of ginger syrup. Each dose was diluted with a full half pint of water, and no evidences of gastric irritation or other disagreeable symptoms were produced. It must, however, be borne in mind that the cases were old epileptics from the lower ranks of life, and in robust general health, with insensitive, powerful digestive organs, so that I think in private practice these large doses should for the present be used with caution. I have, however, given half ounce doses to a delicate girl without perceptible evil effects of any kind.

1925 CHESTNUT STREET, PHILADELPHIA,
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SOME POINTS IN THE DIAGNOSIS OF BRIGHT'S DISEASE.

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THE name of Bright's disease has been attached to so many and such varied cases, and has lately been so broadened by high authorities, that a little inquiry into the correctness of this very general application is by no means undesirable. An excellent way to clear up one's ideas on the subject is for the student, or, still better, the practitioner, after he has become well indoctrinated into the pathological anatomy and symptoms as taught in the text-books, and after having made sundry excursions into the more speculative regions of "high tension" and "lithiasis," to consult the works of Dr. Richard Bright, when he will realize how much travelling in a circle has been done since they were published, and might be tempted to remark that what Dr. Bright didn't know about Bright's disease isn't worth knowing. This would, however, unless looked at simply as expressing his just admiration for the completeness of the discovery of that eminent physician, be a decided exaggeration. One of the points which he did not know, and which have since been found out, is the extreme frequency with which some symptoms of the affections going under this name are met with, as consequent to or associated with other diseases, where they assume entirely a secondary rôle in importance. What he did not know, and what no one yet knows, is the nature of the connection, so well understood to exist, between the cardiac, vascular, nervous, and renal changes. At present the fact is so well known that many affections which would once have been characterized as independent diseases, such as apoplexy, dropsy, and cardiac disease, are very likely to depend upon, or to be associated with, a chronic nephritis which has before given no decided sign of its presence, that this condition is likely to be diagnosticated as an explanation of almost any sudden and serious set of symptoms, and the diagnosis may be sustained by the exhibition of what are supposed to be the pathognomonic features, viz., albumen and casts in the urine. Thus, a case of coma from opium-poisoning may present a very close resemblance, not only in the general condition, but in the state of the urine, to the sudden supervention of so-called uræmic symptoms.

The public is willing to accept Bright's disease as an explanation of almost anything obscure or unexpected. Any middle-aged or elderly man who has a pain in his back, a little difficulty in urinating, or, on the other hand, some incontinence of urine, or who notices in his chamber-pot on a cold morning a deposit, full, to him, of the direst forebodings, but known to the chemist as urates, can be made to believe that he has Bright's disease as easily as a broken-down anæmic woman, with a pain in her back, can be persuaded that she has "womb complaint."

The amount of truth in the two cases is enough to save the doctrine from contempt, and make it worth while to consider some of the mistakes in diagnosis somewhat seriously.

The desirability and importance of setting right the misapprehensions of a supposed sufferer are by no means small, from the amount of mental relief which is thus given, and the question loses none of its importance when considered in reference to the advertisement of "cures" and stories of wonderful recoveries.

It is not necessary, of course, to point out to physicians that neither pain in the back nor its absence, nor the irregularities in urination just mentioned, have any direct value in the diagnosis of Bright's disease, but there is reason to suppose that some other symptoms have attained a position of somewhat exaggerated importance in the minds even of the profession, and are considered more conclusive than experience shows them to be.

Albuminuria is now so well known to occur in a great variety of diseases, and even in some conditions not involving serious or permanent impairment of health, that it is to be looked on rather as a reason for further inquiry than as having by itself a very distinct meaning. Casts, especially of the hyaline variety, are not so generally known to belong very much in the same category. While the writer does not agree with Charcot in believing that casts may occur in a healthy urine, any more than that a purulent sputum comes from a healthy bronchus, it is undoubtedly true that they are often found under circumstances where nothing more than a temporary disturbance of the renal circulation, or some local irritation, exists as a cause. The kidney may be more or less affected, but it is not so primarily, and the renal trouble is not the essential one. Thus, it is not unusual to find a case of valvular disease of the heart, or even of general failing health, connected with fatty degeneration of the heart and consequent feeble circulation, suspected of being Bright's disease from the presence of albumen and casts in the urine. The renal atrophy of old age is not infrequently attended with casts.

If we turn to another symptom, which is of the highest importance in diagnosis, which should always be inquired for, and, if necessary, investigated by daily measurements, namely, polyuria, we find ourselves confronted with another set of difficulties. Of course, the practitioner will not allow himself to be led astray by the statement that the patient arises several times in the night to pass water. This is, to be sure, a suspicious circumstance; but it may arise from a local irritation, or even from simple nervousness. (In the latter case, by the way, the valerianate of zinc has been found a very effectual remedy.) A real polyuria may exist in surgical cases from irritation of the neck of the bladder, retention of urine, and back water in the kidneys, or from a renal calculus. This may be accompanied by albumen and a few transparent casts, and is dangerously near to the line which separates irritation from a chronic interstitial nephritis, which is not infrequently the final result. It is not, however, Bright's disease, and the distinction is a highly important one, since, if the local obstruction or cause of irritation can be removed by surgical measures, the renal atrophy is not necessarily progressive. This kind of polyuria is to be distinguished by the presence of the causative lesions, and especially by the presence of an excess of mucus, pus, and epithelial elements from the urinary passages.

A moderate polyuria of nervous origin, or, in other words, a mild diabetes insipidus, may, from the presence in small amount of the abnormal elements we have been considering, assume the appearance of chronic contracting kidney. The difficulties of diagnosis are by no means slight when we find ourselves in the presence of a case involving not only polyuria with albumen and casts, but nervous symptoms, such as are commonly found in this combination, as vomiting and headache. A cerebral tumor may present the greatest similarity of symptoms to a chronic nephritis, and we may have not only the phenomena just mentioned, but, in addition, others which are more or less common in the two diseases. These are optic neuritis (although this generally presents points of difference, as it may be associated either with intercranial pressure or with arterial degeneration and retinitis) and also high arterial tension. This latter condition, although often present in chronic nephritis of the interstitial form, is too frequently found in other affections to have the supreme importance recently attributed to it, either in reference to diagnosis, pathology, or treatment. The writer, several years ago, was demonstrating a sphygmograph to a little circle of medical friends, and just as the instrument was writing off a tracing which should have been highly characteristic of Bright's disease, or chronic interstitial nephritis, on the wrist of a gentleman about sixty years of age, another asked, "what is this high-tension pulse they are talking about now?" The question was evaded as well as possible, but the subsequent career of the patient, if so he could be called, as well as that of another member who gave a similar tracing, was watched with much interest. The first died about three years afterward, but as both the symptoms and the autopsy showed in the most conclusive way, of cirrhosis, not of the kidney, but of the liver. The second is still, at the age of seventy or thereabout, actively practising his profession.

The symptoms which are most characteristic in each of the affections mentioned above, which are to be specially sought in any case of doubt, are in cerebral tumors, *localized* headache, paralytic conditions of limited groups of muscles or spasm of corresponding groups, and the etiology, which is likely to be syphilitic. For the nephritis, we have the cardiac hypertrophy and the dropsy, usually slight. It is, however, but rarely that the two diseases will approach so closely that the analysis of the urine affords no assistance in making the distinction.

Migraine may be closely associated with polyuria, albumen, and casts, and then certainly makes about as perplexing a problem as can well be met with; one which it is probable can only be solved by time, and even then not so conclusively as to leave the physician and patient altogether free from unpleasant doubts.

It is, of course, open for any one to say that such a case is only in the early stage of a chronic form, and it would be almost impossible to disprove such an assertion. The writer has had under observation for some years a lady who has for a long time been subject to severe headaches, with vomiting. She has had constantly a small amount of albumen and a few casts in the urine, which is rather abundant and of low specific gravity. The sphygmograph

shows somewhat high tension. This looks like a pretty clear case of progressive interstitial nephritis, but although the headaches are perhaps more severe, in the intervals the patient is able to be out and about. At one time she greatly improved under a milk diet, and there has been no appearance of the more characteristic symptoms, such as cardiac hypertrophy or dropsy. Time alone in such a case can assure us that chronic interstitial nephritis will not become more manifest, and go on to the usual termination.

Some of these obscurities in diagnosis may help to explain many of the "cures" of Bright's disease. While the writer would not be understood to deny the possibility of an arrest of a chronic nephritis of either form, which may amount to a cure with a more or less damaged but still sufficient kidney, yet the ordinary professional and lay opinion as to the extreme rarity of such an occurrence, is undoubtedly correct; and few of the cases where a complete recovery from chronic Bright's disease is said to have taken place, will bear a close scrutiny. Where the diagnosis is that of the ignoramus, or of the interested quack, it is not worth while to spend time in accounting for remarkable cures. The explanation is very simple. As has already been said, it does not require a specially credulous patient to accept such a diagnosis, and the marvellous feats of therapeutics are very easy if the intending performer has the opportunity to make the diagnosis to suit himself, and retain it uncontradicted. In other cases, however, I believe that mistakes have arisen from, firstly, the very distinctly intermittent way in which many cases of Bright's disease pursue their course, or perhaps to the occurrence of exacerbations which disappear under the influence of rest, warmth, and appropriate treatment, and give place to decided improvement, which may be taken for recovery. I have seen a man with parenchymatous nephritis, marked cerebral symptoms, and great dropsy, leave the hospital well enough to make a voyage to sea before the mast, and return with the same symptoms, of which, although I have lost sight of him, I have no doubt he finally died. Again, an attack of acute nephritis does not always begin with pain in the back, fever, and exceedingly scanty urine, which at once signify its character; and if appearing, as it not very rarely does, simply as a rapidly increasing dropsy without marked pyrexia, cerebral phenomena, or in fact any of the classical symptoms to announce its true character, it is very likely to be taken for the development of a previously latent chronic disease. If this suspicion is taken as a certainty, and the patient then recovers, the case passes for one of a wonderful cure of Bright's disease, instead of what it really is, the usual and natural result of acute nephritis. Even in the nephritis of scarlet fever some of the signs, especially casts, may hold on so long as to deceive one into thinking of chronic rather than of acute disease.

In some one of these ways nearly every one of the reported cases of "cure" can be accounted for, without either doing great violence to our only too well-founded pathological ideas or impugning the good faith of lay narrators.

THE ETIOLOGY OF TYPHOID FEVER.[1]

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THE most important questions relating to the etiology of typhoid fever are, whether it is alone spread by direct or indirect contagion, or whether it is possible that the cause of the disease at times originates independently of a person sick with the disease. In other words, assuming that a bacillus is the cause of this disease, does such germ only come from some one suffering with an attack of typhoid fever, or does it exist more or less widely distributed in favorable localities, having no connection previously with typhoid fever, but occasion the disease when it has found an entrance to a proper subject? These questions have been the occasion of considerable dispute in the past, nor is such matter settled yet beyond controversy. There are many difficulties in the way of a satisfactory examination of the subject, and in not a few cases we are unable to reach a positive conclusion.

In rural districts and in institutions, typhoid fever seems not infrequently to spread by contagion, as person after person sickens with the disease. Yet in not a few of these instances it can be shown that such contagion is not direct, but indirect. In studying this question of contagion, we are obliged to examine the matter in two ways. We must first satisfy ourselves that the person sick with the disease contracted it at the supposed place; and, secondly, that there was no other rational explanation for such sickness than that of the emanations from the sick. To go more into detail, when a person who is in contact with a patient suffering from typhoid fever contracts the disease, the following possibilities are presented for solution—assuming that, because of continuous residence in the place, the only question is from what in that place was the disease obtained:

1st. The same cause which operated in the production of the first case may have been again efficient.

2d. The excreta from the sick may have produced contamination of the drinking-water, or may have found their way into cesspool, sewer, etc., and the active principle of the disease become reproduced, and, being received by the second person, caused the sickness.

3d. If we can satisfy ourselves that in neither of these ways, nor by any of the other avenues through which the typhoid fever germ gains admission to the system, was it probable or possible for the patient to have contracted the disease; then, and then only, are we forced to the conclusion that the contagion was direct. We must admit that there are many loopholes, and that very few cases would stand a rigorous examination and be capable of proving that typhoid fever was spread by direct contact. In not a few cases we will be obliged to say that it was possible, not certain. In those instances where I have examined into this matter I have not found one by which I have been forced to this as the

[1] A paper read before the New York County Medical Association, February 18, 1884.

absolute and only conclusion. The negative side of the question, too, must be examined in order to estimate the extent of this danger, if such exists. Error is very liable to occur if too much reliance be placed upon this method of procedure; nor is it safe to say that because ninety-nine have not taken the disease, though directly exposed, that the hundredth person did not. The usual method of studying this aspect of the case is to cite the instances of hospital nurses, attachés, and patients, waiting upon or in close proximity to typhoid fever patients by reason of occupying the same wards, and to show that these either did not or did in no considerable numbers sicken in consequence. Those who believe in contagion cite those who contracted it under these circumstances as instances of direct contagion; whereas, the opponents endeavor to offset this by supposing that such instances are to be explained upon the basis of imperfect sewerage of such hospital, etc. The frequency with which typhus fever is contracted under similar circumstances is used as a foil by those who are opposed to accepting the idea of direct contagion.

The writer has had considerable opportunity of watching the difference manifested by these diseases in this respect, especially with reference to hospital nurses. He is obliged, however, to admit that he has known instances of physicians, nurses, and patients contracting typhoid fever in an institution where typhoid fever was received. On one occasion a house physician sickened with the disease, but at the same time an employé of the hospital, who had no contact whatever with typhoid fever patients, but who was exposed to emanations from the same line of sewer which was imperfect in in its arrangements, and was in the physician's room, contracted the disease. During the past autumn three nurses who had been attending typhoid fever cases were under his care; two of these had typhoid fever, the third had probably aborted typhoid fever. But in each instance sanitary defects existed in the hospital or house where the disease was contracted.

Moreover, with reference to the nurses in hospital, four patients contracted the disease at the same time. Two of these occurred in wards in which no typhoid fever was received, and it was necessary to admit that direct contagion could not have been efficient in their cases. They, however, used water-closets in connection with sewers receiving typhoid fever excreta, and more or less imperfect. The nurses were exposed to these same sewer emanations, as well as to the direct emanations from the patient. The writer, moreover, had reason to believe that the disinfection of the passages from the bowels was imperfectly performed. In order to arrive at a just conclusion in this matter, an inquiry has been made at several other hospitals receiving typhoid fever patients. The result of this inquiry is in the main negative. All claim that no nurse or patient in the wards contracted the disease; but in one, some years ago, one of the physicians contracted typhoid fever while residing in the hospital, and in another a domestic sickened with the disease.

The hospitals interrogated have been the New York, Presbyterian, St. Luke's, Mount Sinai, Riverside, and Bellevue.

The result of this part of the investigation is that typhoid fever does, at times, occur amongst those resident in a hospital receiving patients with the disease, but that the number of cases where this has not taken place would point towards failure of disinfection or to defect in the plumbing of the institution. Such occurrence, too, is an illustration of another fact—the spread of the disease by the sewers independent of the ground water.

The principal source of typhoid fever in New York City is to be looked for in defective sanitary arrangements, permitting the entrance of the emanations of the sewers, either to the air or to the drinking water of which the patient makes use. In a large city, and particularly in the fall of the year, these sewers receive enough germs from typhoid fever cases to make any investigation as to whether the disease arises spontaneously, or always from germs which have been derived from the excreta of typhoid fever, impracticable. It would be a great mistake to suppose that invariably where sewer emanations gain entrance to a house, and even where the defects are very great, typhoid fever will appear. The writer has seen marked exceptions to such an idea; exceptions which, together with the susceptible character of those exposed, only prove that something more is necessary than ground saturated with water and sewage in order that typhoid fever should occur. Diphtheria has sometimes occurred under such exposure, and not typhoid fever. Again when apparently far less vitiation of the air has occurred, typhoid fever will break out. In other cases, the defects have existed for a long time, the so-called sewer gas has been vitiating the air, but no typhoid fever has appeared; when at length one or more of those exposed sicken with fever.

Such illustrations show that it is not as is so frequently supposed by the laity, or as is often laxly said, the sewer gas, but something added thereto, which has gained entrance to the system through these sanitary defects. Many suppose that the determination of the question as to the method by which the poison gains entrance to the system is easy, whether by the air or by the drinking-water. But the writer has found in a number of cases that the determination of this matter is not of such easy solution. If we suppose that germs are floating in the air the question must be again raised, Do they occasion the disease by being received through respiration and by the lungs, or are they by this act simply drawn into the mouth and throat, and thence swallowed with the saliva, food, and drink, to develop in the alimentary tract? The writer thinks that this latter is the method more probable.

Anyone who has examined much the sanitary defects in cases of typhoid fever, will find that vitiation of water is in many cases possible, especially at the present time, with our defective water supply and water pressure. The drawing of water on a lower floor causes a partial vacuum, which, if stop-cocks are open, or if tanks supplied by ball-floats, which open the pipe when the water is lowered, are more or less empty, or by defective valves to pipes

on water-closets with direct supply, causes an aspiration of air into the water-pipes of the house. How forcibly this suction is, anyone can estimate by allowing the water to run on a lower floor, and then opening a stopcock connected with the pipe on a higher story. The same danger exists through the overflow-pipe of tanks when they discharge into sewer-pipes. The writer has traced outbreaks of typhoid fever in two institutions to sanitary defects of this nature, and operating in this way. Occasionally much more radical defects are witnessed, and that at times in houses which have been pretty carefully examined. The writer has seen water-pipes connected with the sewer-pipe of a house. This is very ordinary for the discharge of the water from the boiler in the kitchens of our houses. It would be difficult to suppose that this could, under the circumstances of its position, and the relation of the pipe to the range, be a source of trouble. But the connection of a small pipe from the supply-pipe of a water-closet directly with the sewer-pipe of a house is a menace of a more serious nature.

There are cases on record of severe outbreaks of typhoid fever, due to the sucking of sewer-air and its accompaniments, or even of some of the liquid sewage, into the water-pipes of an institution or of part of a town. Such accidents happen when the water supply is intermittent, or has been for any cause withdrawn from a district and the pipes been emptied of water. In these cases, where small leaks are in proximity to defective sewers and drains, or by methods above indicated, either liquid sewage or air from such source may be drawn into the water-pipes. The experience of Liverpool, in its attempt to increase its water supply by cutting off waste and leaks, shows that there is more danger of this than many would suppose, who think that where there is a leak the outward pressure will always prevent harm. When we read that it was impossible for the steam fire-engines to obtain water at a recent fire, we see a source which is not alluded to of drawing by suction, through defects, dangerous matter into the water-pipes. Much, of course, of such harmful matter would, under the circumstances, be again discharged; but the fact of the ready emptying of the mains by powerful suction is ominous.

Attached to the tenement-houses of New York City, a large number of privy-vaults still exist. There is but one form of these places which is devoid of danger if properly cared for. The school sink or trough-closet does not admit, except by gross carelessness, of that accumulation of filth which is the abomination of those other places; moreover, it can be readily cleansed and disinfected in case of typhoid or other infectious disease appearing in the house. The question of origin in such cases, with or without the germs from a pre-existing case of fever, is in a large city as impossible of a just decision as in the case of defective sewerage.

The following illustration will exemplify this: A pedler, who was a patient with typhoid fever in Bellevue Hospital, stated that he had been affected with the diarrhœa of this disease for the week preceding his admission to the hospital, and that during that week he had plied his vocation in different portions of the city, using, as the occasion demanded, the conveniences of tenement-houses. He admitted that he had probably visited forty-eight such places during the week. The writer knows of no recorded instance on this matter which better shows the possibilities in this direction.

That such places serve to develop the poison of typhoid fever there is sufficient evidence, and the method of action may be in one of three directions: 1. By the use of the place. 2. By the leakage from such places causing saturation of the soil beneath a house. 3. By the connection of the living rooms of a house with such places by waste-pipes. The writer has seen cases which justified him in believing that in each of these ways typhoid fever was contracted. The attempt to remove these places and to cause the substitution for them of trough-closets, or a proper form of water-closet, has in the past been the cause of considerable difficulty between the owners of tenement-houses and the Board of Health; and the writer is obliged to add that the courts have at times taken the ground that such places are not nuisances *per se*, but only that in individual instances they may become nuisances.

For several years the Board of Health has refused to allow any to be constructed. But under the law the tenement-house owner has the option of a trough-closet or some form of water-closet. The writer has feared that, with the defective water supply and consequent deficient flushing of soil-pipes, an increase of typhoid fever might result from the introduction of water-closets in the tenement-houses on a large scale. In how far some of the increase of the disease may be attributed to this cause he has been unable to learn. Fortunately a portion of this danger has been avoided by the plumbing law, through whose instrumentality the Board of Health can locate the position, and regulate the construction of the plumbing. The Board cannot, however, prevent misuse, and cause constant cleanliness to be observed, but too often can only act when the evil has occurred. The moral responsibility rests with the owner of the property to prevent evil by the enforcement of thorough cleanliness through proper supervision, and also by providing an ample supply of water for flushing.

The spread of typhoid fever by the use of polluted water in the city of New York is not limited to the methods by which, as has been pointed out, the Croton becomes contaminated. In the upper portion of the city, and especially in the annexed district, wells, with all the attendant liability of sewage pollution, are still in use. So, also, there are a certain number of wells within the built-up portion of the city. The writer was able to trace the outbreak of typhoid fever in an institution to the use of such water by the employment of the chloride of lithium test. The place was supplied both with Croton water and had a pump on the premises, within fifteen feet of which ran a sewer from the hospital building some five hundred feet away. Mr. Nealis, the Inspector of the Board of Health, had been detailed to examine into the cause of a number of cases of typhoid fever in the institution. He

found the disease mostly limited to the boys, in whose playground the pump was, though the institution contained both boys and girls. The plumbing of the institution had been thoroughly overhauled. These facts led him to suspect the pump. We advised that the drain going from the hospital be exposed, suspecting that we should find a leak, but though thirty feet were laid bare in either direction, the ground did not show the least indication of leakage. Moreover, a chemical analysis of the water did not prove it to be especially bad. Under these circumstances the writer suggested the use of chloride of lithium as a test. An ounce dissolved in a pail of water was poured down the sink of the hospital. Water was taken from the well an hour before this, and each hour for six hours subsequently, and on the next day. Dr. Waller, of the School of Mines, made a spectroscopic examination of the water, which showed no lithium in the water before or on the day after the journey of the solution into the pipes, but that it was present during each hour at which water was taken on that day. This showed undoubted communication between the sewer and the well. The disuse of the water was followed by cessation of the fever. The pump-water was used by the boys as they played, and also because its taste was preferred on the table to Croton water. As each of the boys who was taken sick was removed to the hospital, it can be readily seen that this furnished a very good means of propagating the disease. The writer does not know who first suggested the lithium test, but he has not heard of any other instance of its employment.

In many cases the chemical analysis shows such evidence of sewage pollution, and the position of the well with reference to sources of contamination, cesspools, privies, etc., is so open to suspicion that it is very justly suspected of being the cause of an outbreak of the disease. But there is a caution necessary in that in each case all the possibilities should be carefully weighed, because, notwithstanding the use of polluted water, it may be that that has not been the direct exciting cause. Instances are common in which use has been made of such water for a considerable period without the development of typhoid fever. A single case of the disease in any locality does not afford the groundwork for fair reasoning. But when a number occur at the same time, or consecutively, then we have a basis upon which to rest. In an investigation which the writer made of the causes for an outbreak of the disease in a neighboring college, the method of procedure can be illustrated.

He had charts furnished him showing the name of each person sick, the date of sickness, the boarding-place, and the building in which his room was situated, and so far as possible what he drank. There had been some thirty cases of fever, which seemed to be distributed pretty generally in the different college dormitories. But an investigation started in this manner showed that though the first six to come down with the disease lodged in different buildings, yet they all took their meals at the same house. Moreover, in these dormitories at that time no other serious sickness occurred. Hence this house became justly suspected of originating the trouble. Later it was discovered that a servant employed in that house also sickened with fever at the same time.

Within this house was a water-closet discharging into a cesspool with earth sides and bottom, in a shale soil, forty feet distant from a well. The water of this well was found on chemical analysis to be seriously polluted. Another cesspool from the kitchen was also within a short distance. These six persons became ill, with one exception between March 15th and April 1st, all previous to April 1st.

The first to be taken sick not only had his meals, but roomed in the house with the suspected well. It was about the middle of May before other cases began to occur, with two exceptions. These, however, did not room in the college buildings. Four of the six thus taken sick in April had rooms in three of the college dormitories. The sewerage was by water-closet, discharging into two cesspools, in different directions. Some of the sick remained only a short time after coming down with the disease, but one stayed throughout the whole course of his illness. The excreta were thrown into the water-closet, and reached one of the cesspools. The overflow of this was obstructed by some of the neighbors, and was over quarter of a mile from the college. After the middle of May the disease became distributed to the different buildings connected with the cesspool. The water supplied to the college was tested frequently, but showed no chemical evidence of contamination. As a holiday had intervened, and, morever, as on the breaking out of the disease again it did not select the dormitory in which the sick student had remained, but affected particularly a dormitory which stood nearer to the cesspool; and, moreover, as radical defects were found in the arrangements which had been made for the ventilation of the sewer by a chimney in this building, it was rendered morally certain that the disease had spread, not by the drinking-water, not by the air, nor by direct contact, but by means of the emanations from the sewer and cesspool into which the passages from those sick with the fever had been thrown without disinfection. Moreover, the disease affected others in the town who had no intercourse with the sick, but only became affected through the vitiated sewer-air.

To show how negligent people are even after a warning, the writer may be pardoned for alluding to an occurrence in this same town over six weeks later. In the mean time the college authorities had done every possible thing to improve and remove the causes of the trouble. The writer had made a visit to the town with a view to ascertaining the amount of sickness still prevailing. He found that in two adjoining houses, using a pump in common, there was in the ground beneath the spout, a gutter which led into a drain supposed to be open, but which a short time before had been found closed. The people had been in the habit of throwing the slops from the house into this gutter, and it was proved that this must all have found its way into the well. Three of the people in these two houses had typhoid fever. Moreover, the writer heard of

an instance in which one of the students going home with the disease, several other cases had followed at his home. These were at first attributed to direct contagion, but they had emptied the slops and the wash-water in such a manner as to render pollution of the drinking-water a matter of great probability. Disinfectants had not been used, owing to the nature of the disease at the college not being known at that time. As regards the question of origin of this outbreak, whether spontaneous or from a previous case, the writer was unable to come to a positive conclusion. It is true that the first person sick had come from his home a little over two weeks before he became ill, but he had gone home in poor health several weeks before this. The cause of ill health was said to have been malaria. An inquiry by Dr. E. M. Hunt failed to prove that he brought the disease from home or that anyone else had been sick at that house or visited there after convalescing from a sickness.

The writer could enumerate other instances in which an institution in the country became affected, without any proof being obtainable that a first person had brought the disease.

Other avenues by which the disease may be introduced in a house, and of which the writer has seen possible, though not positive, illustrations, are by means of refrigerators having direct sewer connections, and containing milk and food. In such case the former would be the more probable vehicle.

The writer has been able to connect only one outbreak in this city with affected milk, possibly diluted with water coming from a contaminated well, etc., as in the cases reported from abroad, especially from England. One of these occurred this fall in a portion of London, and seems to have been pretty clearly traced to this source. The number affected was over four hundred. In the case above cited it seemed extremely probable that milk had been the vehicle, as the gentleman whom he saw in consultation only drank milk and Clysmic water and other probable sources had been excluded.

With relation to the intimate nature of the agent which produces the disease, the writer, without any such careful examination for himself, is prepared to admit that it is, in all probability, a bacillus, and that it is possible that the one which has been figured and described by Eberth is the correct one. All this chain of reasoning would seem to point to such an agent as a logical necessity.

The writer has reached the following conclusions with reference to the etiology:

1st. It is in all probability due to a bacillus.

2d. That this virus is certainly contained in the discharges from the bowels.

3d. That it gains entrance to the system through the air coming from places into which the discharges of other typhoid fever patients have been deposited; or through water contaminated by a similar process; or through milk diluted with contaminated water, or perhaps vitiated by contaminated air.

4th. That there are instances which point to the probability that the germs which produce typhoid fever may develop in a suitable soil, but not have been derived from a preëxisting case of the disease.

5th. That it is not necessary to invoke the aid of the rise and fall of the ground water to explain the disease; though a low state of the ground water, by favoring an increase of the impurities in a well or water supply, may favor the spread of the disease, as may also a sudden severe rain after a draught by washing impurities, including the germs of the disease, into the drinking-water.

6th. That the failure of the disease to spread when prompt and thorough disinfection of the excreta has been performed, as well as of clothing soiled by such discharges, makes it extremely doubtful whether the disease is communicated by the respiration, perspiration, etc.

7th. The writer has had no opportunity to study outbreaks of fever resembling typhoid, such as have occasionally been met abroad, and ascribed to the eating of diseased meat.

One feature in the study of the etiology of typhoid fever is of considerable importance, and is deserving of special consideration, in order that we may have more certain information in the future from a frank recognition of what is obviously a growing evil. The writer has frequently felt, in dealing with statistics on this subject, some uncertainty with reference to accepting the facts from the mortality statistics at their face value. Some years since the Board of Health endeavored to find out from physicians about the prevalence of the malarial group, and the Sanitary Superintendent, Dr. Day, addressed circulars and maps to a number of the more prominent practitioners, and those having the most extended practice, asking their coöperation; but the attempt came to naught through the lack of interest displayed and the failure of response on the part of the profession. So also in the majority of instances any inquiry by letter or otherwise with reference to a death certificate has been looked upon as a sort of insult, and by arousing an immediate antagonism has prevented any fair result being achieved. I may be allowed, having no longer any connection with the Board of Health, to ask of the profession a correction of these matters in the future.

The tables which the writer had made in connection with the study of this subject, give in detail the number of deaths which have been ascribed to each of a number of febrile diseases since 1852. A noticeable feature observed, is the change of nomenclature which has taken place. Until 1862, a certain number died simply of fever. So also the terms bilious, hectic, gastric, miliary, and nervous fevers were in use.

Of these, at the present time, only the term gastric is occasionally used. But then and now intermittent and remittent fevers are assigned as causes of a considerable number of deaths. The term typho-malarial came into vogue in 1871, as the cause of twelve deaths, and since that time has been employed with increasing frequency. So also continued fever, without specification, and congestive chills have been the terms employed to account for the fatal termination of disease in eighteen cases during the year 1883.

The result is that a large total is reached in each year by the malarial class of diseases, and in each of the last four years more deaths are ascribed to these diseases than to typhoid fever. Four hundred and sixty-nine in 1880, six hundred and five in 1881, four hundred and forty in 1882, and five hundred and twenty-five in 1883. In these numbers one hundred and thirty to one hundred and fifty-four deaths in each year from the hybrid typho-malarial fever are included. As far as New York City is concerned, the writer regrets the employment of this term. It has led to confusion, and has furnished a happy avenue of escape in doubtful cases; which, like many other easy roads and short cuts, lead into a quagmire of doubt and misconception. Moreover, it has prevented those proper measures from being employed which would prevent the spread of typhoid fever, and lead to an investigation of its causes. The writer has long insisted that the evidence of post-mortem examinations is opposed to the use of the term, and he has known cases which clinically seemed, and were asserted to be, typical of this combination, which only presented the ordinary anatomical conditions of typhoid fever. The writer does not mean to deny that in very malarious sections of country some cases of typhoid fever would show certain appearances of a by-gone or complicating malarial poisoning; but to assert that, so far as New York City is concerned, it must be extremely rare. In fact, cases considered typho-malarial are as far as the great majority are concerned typhoid; in a few instances they may be remittent; the rest are illustrations of mistaken diagnoses, tuberculosis, masked pneumonia, etc., being the condition present. Moreover, when we find it stated that four hundred and seventy-one deaths occurred from typhoid fever, and five hundred and twenty-five from intermittent, remittent, typho-malarial, and continued fever and congestive chills in 1883, this is in direct opposition to the teaching of post-mortem examinations. According to this, we should see forty-seven cases of typhoid to fifty-two of these other complaints.

The writer, from a long experience in hospital practice, can assert that true intermittent and remittent fevers proving fatal are not indigenous; they occur mostly in people coming from subtropical or tropical climates. For a long period he has given his attention to the place of origin of well-developed intermittent fever, and he has been surprised to see how large a proportion has occurred in non-residents, or those having a temporary residence out of the city and in a malarious region. As of typho-malarial, so of the rest of the class; some of these others are typhoid, others tuberculosis, internal suppuration, pneumonia, etc. But this uncertainty is of importance because it prevents the acquisition of true information about the increase of typhoid fever. Manifestly, it would be incorrect to class all or perhaps even half of these cases as typhoid. These cases, too, have a direct bearing upon the etiology of typhoid fever in that, by failure of the disinfection of the evacuations, and also of the places in which they are deposited, they serve to allow of the increase of the disease. In Bellevue Hospital six hundred and fifty-three cases of malarial fever have been treated during the past three years with only three deaths. The writer has not had time to make an inquiry of other hospitals upon this point, but there are those here who can answer it.

Year.	Typhus.	Typhoid.	Remittent.	Intermittent.	Bilious.	Chagres.	Congestive.	Gastric.	Nervous.	Total of diseases other than typhoid and typhus.
1852	692	147	79	10	20		22		51	137
1853	399	171	54	16	37	13	18	2	29	140
1854	349	157	72	34	41	22	23	10	53	202
1855	439	172	73	23	20	19	17	8	33	151
1856	251	155	192	33	37	4	23	5	25	204
1857	171	133	79	28	26	4	8	5	14	147
1858	126	241	70	22	16	2	22	6	35	138
1859	174	218	62	13	12	1	6	5	12	105
1860	198	232	45	4	31	1	19	7	20	103
1861	199	245	33	12	36	1	5	3	13	90
1862	136	417	30	12	14	2	3	7	13	63
1863	429	501	20	16	102	1	1		5	146
1864	764	661	37	15	197					159
1865	544	573	95	17	195					187

YEAR.	Typhus.	Typhoid.	Typho-malarial.	Remittent.	Intermittent.	Continued.	Congestive congestive chills.	Total of diseases other than typhoid and typhus.
1860	433	514		132	26	2		130
1867	1	847		68	22			110
1868	137	5..		111	21			132
1869	125	378		109	16			123
1870	7	422		147	66			213
1871	68	249	12	195	11	3		209
1872	80	364	22	193	111	10		336
1873	34	294	14	164	86		13	282
1874	14	275	30	142	101	7	6	295
1875	28	347	20	133	106	7	9	275
1876	25	263	42	114	93	8	5	237
1877	17	275	60	152	75	8	3	315
1878	4	245	70	170	62	7	6	361
1879	4	178	28	140	12	9	17	390
1880	3	241	131	18..	105	11	12	469
1881	10..	41	142	182	244	15	16	605
1882	93	302	154	155	200	5	16	440
1883	15	471	154	172	174	9	12	525

The relationship of age to the development of typhoid fever is of considerable interest. I have been unable to obtain the ages of the reported cases for this city, as such table has not yet been prepared. But in considering the tables of mortality for the last ten years, it will be observed that more than half the mortality occurred between the ages of ten and thirty. So also it will be noted that the disease is uncommon as a cause of death during the first year of life, only sixteen cases having been reported during the past ten years in a total mortality of over thirty-one hundred from typhoid fever during this period. Neither is it a frequent cause of death during the first four years of life, one hundred and seventy-five cases having been reported for this period. It will also be observed that the mortality gradually decreases for the ages over thirty, and

more particularly over fifty. Still three deaths are recorded from this cause between eighty and eighty-five, out of the totals above given; seven between seventy-five and eighty years, sixteen between seventy and seventy-five, and a total of two hundred and thirty-four above fifty years of age. The tables will give the number at the different quinquennial periods.

We can more readily understand the exemption of old age than that of infancy. There are, however, it seems to the writer, several reasons which are of importance in helping to solve the reason for this state of affairs. The diet of infancy is largely of milk and of mother's milk. Hence there is freedom in a great measure from one of the chief causes of the disease. There have been several outbreaks of the disease attributable to milk, but were there a very great danger from this source, then we should expect to have the tables reversed. Some may imagine that the characteristic changes in the bowels are not recognizable in infancy. There exist sufficient examples to disprove this idea. In fact, cases are cited which would go to prove the possibility that the disease began in fœtal life or just after birth, so as to force the conclusion that the mother might receive the germs of the disease and transmit them to the offspring without herself suffering from it. A greater probability is that some of the cases classed as entero-colitis, are due to typhoid fever poison.

A greater reason for the less frequent existence of typhoid fever in the earlier periods of life, relates, in the writer's opinion, to the fact that these infants are, in many instances, not alone less exposed to the danger from water, but also from contaminated air. When we reflect for a moment upon the methods employed for excremental removal in childhood, we shall see that they are in considerable measure removed from the danger of breathing cesspool or vault air.

A fourth suggestion is that, where danger from milk exists, this is in a considerable measure neutralized by boiling for preservation. The main intensity of the disease falls upon the last summer and early autumn months, during which many people are forced to resort to this expedient in cities.

A fifth hint is that mistakes are made in diagnosis, both as between typhoid and other diseases, and as between other diseases and typhoid fever.

As regards old age we have the increasing resistance of the system to the poison of certain other diseases, as well as of typhoid.

Deaths in ten years according to age:

Under 1 year,	16
" 3 "	175
5 "	203
5 to 10 "	243
10 to 15 "	416
15 to 20 "	554
20 to 25 "	371
25 to 30 "	319
30 to 35 "	204
35 to 40 "	159
40 to 45 "	138
45 to 50 "	112
50 to 55 "	68
55 to 60 years	55
60 to 65 "	49
65 to 70 "	36
70 to 75 "	16
75 to 80 "	7
80 to 85 "	3

The disease has prevailed here particularly during August, September, October, and November. The accompanying tables of reported cases and of deaths will show the facts in the case. The number of cases reported is not equal to the amount of the disease, nor can the proportion existing be accepted as a proof of liability to fatality, owing to the undoubted failure of certain physicians to report their cases.

A question of some importance arises whether the disease is increasing; as before stated, an uncertainty exists owing to the number of possible cases included under other heads. But I have had the mortality tables so arranged, that the fatality from typhoid, typhus, and the other fevers likely to be confounded, can be studied side by side. Since 1879, the writer knows that typhus means typhus, and for the four years before that the cases given as such in the mortality sheets, were only accepted on inquiry from the physician reporting such. The study of some of the previous years makes it possible that errors crept in, as when typhus was prevailing typhoid increased. It is a singular fact that many foreign cities still include the deaths from typhus and typhoid under one head. This renders a study of comparative prevalence of the disease difficult.

MEDICAL PROGRESS.

LIGATION OF THE EXTERNAL ILIAC ARTERY.—On December 11, 1883, DR. GAETANO DESOGUS performed the operation of ligation of the external iliac on account of a wound of the femoral artery. The patient recovered.—*Gaz. degli Ospitali*, January 16, 1884.

OSSIFICATION OF THE BRACHIALIS ANTICUS.—Many cases of ossification of the deltoid or of the adductor magnus have been observed among soldiers, and have come to be looked upon somewhat as professional lesions. RASMUSSEN now reports two cases of ossification of the brachialis anticus occurring at the military hospital at Copenhagen. After prolonged muscular effort, a tumor appeared in the middle of the muscular mass of the arm. It was very hard and painful, and easily distinguished from the biceps in front and the triceps behind. There was considerable functional trouble, and movements caused pain. Complete extension of the forearm could not be effected. The acute stage having passed off under the use of cataplasms, a sling and rest, the tumor was found to be reduced, but resembling an osseous growth from the humerus, and involving the brachialis anticus. After treatment, which did not exceed one month, the patients returned to duty. In one case the osteophyte diminished markedly in a month. Rasmussen is inclined to believe that the affection is caused by rupture of muscular fibres and of the fibres of the insertion of the periosteum; this is followed by an extravasation of blood, which is progressively transformed by a simultaneous regression and osteogenesis. —*Archives Méd. et Pharm. Mil.*, January 16, 1884.

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SATURDAY, FEBRUARY 23, 1884.

LEGISLATION REGULATING THE PRACTICE OF MEDICINE IN NEW YORK.

THE necessity of placing certain restrictions around the practice of medicine, in the interest of the community, has impressed itself upon the legislatures of many States, and has led to the enactment of various laws on the subject. The question as to the propriety of such legislative enactment governing the practice of medicine, naturally divides itself into two parts. First, is legislative interference desirable or necessary for the proper protection of the community, or in the interest of the profession, or both? Second, granting an affirmative answer to the first question, how far should such interference extend?

Anyone who is familiar with the state of the practice of medicine in England as it was forty years ago and as it is to-day, or as it is now in those of our own States in which efficient legislative regulation exists, as compared with that in which no such laws are in force, must admit that good results may follow such enactments. Exactly how much advantage has accrued to the community it is difficult to determine; but it is reasonably certain that money has been saved to its members, and permanent loss of health, and probably even of life, averted. That the profession must gain by the elimination of a class of unscrupulous and ignorant pretenders from those allowed to prescribe and dispense medicines is too evident to require demonstration.

It being clear that we may reasonably expect good to accrue to the community and to the profession by appropriate State legislation, in what should this consist, and how far should it go? In the first place, has the State any right to lay down the law to its citizens as to whom they should consult in any given illness, or forbid their taking any treatment which their own choice or that of their friends may select? Clearly not, so long as their own health, and not that of their neighbors, is jeapordized thereby. Prof. Huxley has justly said, in a recent address on this subject, "it would surely be a monstrous thing that a man having the toothache should not go into the first druggist's shop and ask the man behind the counter to give him something that would do him good." And we say, with him, "do as you please; go to anybody you like" for advice.

On the other hand, the State clearly has a right to insist that those whose certificates as to causes of death, or condition of health, it receives, or those to whom it trusts its immediate employés, or those upon whose opinions it depends for counsel, should have certain qualifications; that they should not be pretenders, or knaves, or blockheads. Not only this, but it owes to its citizens protection against such, by placing them out of their reach as far as possible—by depriving them of legal recognition. This is practically what is done in England, although we believe it is not commonly so considered. As we understand it, anyone who chooses can practise medicine in England, but he cannot, unless he possesses certain qualifications, be registered; and therefore cannot collect his fees, or give testimony at a coroner's inquest or in a court of law; nor are his certificates as to causes of death recognized. A man who is shorn of these prerogatives has not much to practise for.

The question next arises, How shall the proper qualifications be secured? It is evident that no laws would be necessary if medical colleges were what they should be; but as they are not, and are not likely to be for some time, some other measure must be taken to secure the end so much desired.

At the first blush, it would seem that the simplest and most efficient method would be for each State to appoint a Board of Examiners, independent of the medical schools, who should test the candidate for registration in the branches, a knowledge of which constitutes a thorough medical education. To say nothing of the difficulty of securing examiners with the requisite qualifications, two others are to be overcome before this idea can be carried out. The first is that of securing a Board independent of politics, the influence of which, always baneful, is especially destructive to the honest exercise of the offices of a body in which special educational qualifications should alone be the criterion of appointment.

The second difficulty may be more apparent than real; but it strikes us as being an essential one in

the way of the attainment of the highest objects of legislation. In the existing state of public opinion, it would, of course, be impossible to enact a law which does not acknowledge, in some way, the so-called systems of medicine, including, at least, homœopathy and eclecticism. To our mind, it is utterly incompatible for the adherents of these different systems to sit in the same Board, and for those of one system to vote upon the qualifications of the adherents to another, with the practice of which they not only are not familiar, but also the principles of which they believe to be false. It appears to us that the only consistent plan would be to have a separate Board for each system, which would result in a complication of machinery, most troublesome, if not impossible, to manage.

But let us briefly examine how the question has been practically dealt with. The laws which have been adopted by some of our States go further than we have suggested; others, not so far. The former not only refuse to register such as do not meet the legal requirements, but they do not allow them to practise under any conditions. Such are the regulations in Illinois and West Virginia. Yet these States recognize the diplomas of a large number of medical colleges, and do not go behind them. Others, as North Carolina, Alabama, and Mississippi, require all candidates for registration—those holding diplomas and those not—to appear before State or county boards.

We have before us copies of the most recent Acts proposed for the settlement of this vexed question. They are those presented by Drs. Sturgis and Wey, at the late meeting of the New York State Medical Society. Both Acts provide for a commission of nine men, practitioners unconnected with medical colleges, to be appointed by the Governor and to be called the Medical Faculty of the University of the State of New York. The Sturgis bill provides for "representation of the several systems of medical practice recognized by the incorporated medical societies in the State, in the proportion of six, two, and one." The Wey bill does not provide for such representation. According to the Sturgis bill, *all* persons desiring to practise medicine after the passage of the Act, shall be examined by said board in anatomy, physiology, histology, pathology, theory and practice of medicine, chemistry, surgery, obstetrics, materia medica and therapeutics, and such other branches as said faculty may agree upon, subject to the approval of the Regents of the University. But all candidates for the examination must give proof that they have received a diploma from some legally incorporated college.

In the Wey bill, graduates of New York medical schools are exempt from this examination, but the Act provides for the presence at the examinations by the college faculties of three members of the State Board or Medical Faculty of the University of the State of New York, who practically supervise these examinations. The expenses to and fro and twenty-five dollars a day to each of the members of the Board are to be paid by the medical school whose examination is supervised. The Wey bill does not specify the subjects on which the candidates are to be examined, but the questions are to be determined by the so-called medical faculty, subject to the supervision of the Regents of the University. The Medical Faculty by both Acts can revoke, for cause, the license conferred.

Both bills provide for the payment of considerable fees by the candidates; the Sturgis bill fifteen dollars on application and ten dollars on issue of license, the Wey bill twenty-five dollars on application and fifteen dollars on issue of license. By the Sturgis Act, the Medical Faculty may even revoke, for cause, the charter of any medical college within the State.

The Sturgis Act appears to present the advantages of being more simple, more easily administered, and more just.

We do not understand why, as provided for in the Wey bill, the graduates of the schools of New York State should be exempt from examination, when it is well known that some of them are quite indifferent as to their conditions of graduation as compared with some in other States? It is true the Wey Act provides for a supervision of the examinations by these schools, but such supervision implies an interference with the internal arrangements of colleges which is likely to be resented and to lead to misunderstandings. It is better that the State Board should be in every way independent of the colleges. As it is through the medical schools, after all, that the qualifications of the candidates are to be secured, and as it is evident that the granting of degrees under proper conditions fosters a higher education, it is but right that every candidate for the State license should possess a diploma from a legally chartered institution, which is not essential in the Wey bill.

We believe that some provision looking to the preliminary education of the candidate before beginning the study of medicine, such as is required by the British Medical Council, which is now the registering body of Great Britain, would tend to accomplish more satisfactory results than a supervision of the college examinations.

It will be noted that the organization of the so-called medical faculty calls for nine members in each bill; the Sturgis bill dividing them among three systems, by which we presume are meant legitimate medicine, homœopathy, and eclecticism. The Wey bill calls for the same number, but does not specify the composition of the faculty. As this

is a question which must be met sooner or later, it may as well be met at the outset, and we think it an objection to the Sturgis bill that it does not specify more precisely what is meant by its systems.

The title adopted by both Acts for the examining boards—"The Medical Faculty of the University of the State of New York"—seems objectionable. The term "medical faculty" has so long been applied to a teaching body, that we think it must give rise to confusion. The Medical Council of the State of New York, or the Examining Board of the State of New York, would be more explicit. The practice in some of the States of characterizing these boards as State Boards of Health, or of making such regulations a part of the duty of Boards of Health, we deem of doubtful propriety.

The disciples of the New Code are already experiencing the difficulty of keeping their recently sought friends within control. The New York State Homœopathic Society, instead of immediately disbanding and falling into the proffered embrace of the other State Society, as was confidently predicted it would when the New Code was adopted, has the ingratitude not only to maintain its name and organization for all they are worth, but also, at its annual meeting, held at Albany last week, it has adopted a memorial expressing its disapproval of the medical bills presented at the late meeting of the New York State Medical Society, and now before the Legislature, and demanding that any board of examiners which may be authorized by legal enactment shall be composed of "three allopaths, three homœopaths, and three eclectics."

Having received the unsolicited indorsement of the New York State Medical Society, it is not unnatural that its substantial fruits should now be demanded by these irregulars; and if the New York State Medical Society is not ready, in the bills now pending, to concede to all "legally qualified practitioners of medicine" the equal standing which their State laws give them, then what does their New Code mean?

EVACUATION OF SPINAL ABSCESSES.

Prior to the introduction of antiseptic surgery, the treatment of abscess dependent upon caries and necrosis of the vertebræ was most unsatisfactory. A case was, however, now and then recorded in which recovery followed incision and drainage of the sac, this method having replaced subcutaneous opening by a valvular incision, which the accumulated experience of years had proved to be worthless. At the present day, the recognized procedure with the majority of surgeons is to open the abscess under antiseptic precautions, wash out the cavity with a germicidal agent, and provide for efficient drainage; but this operation is delayed until the abscess has steadily increased in size, or has approached the surface in one of the usual situations.

In a clinical lecture, published in *The Lancet*, December 29, 1883, Dr. Chevasse, of Birmingham, urges, first, that the cavity of the abscess be freely opened and adequate drainage established as soon as the diagnosis is complete, or before the pus has pointed; and, secondly, that the incision be made above the crest of the ilium, with a view to furnish easy drainage at the most dependent part as the patient lies on his back. Other advantages derived from opening a psoas abscess in this locality are, that the drainage-tubes may be omitted at an early date, that the drain-hole being very near the diseased bone, the three or four inches of abscess cavity below this point become obliterated in a few days, and that the antiseptic dressings can be applied and retained in position more readily than if the opening is in the thigh. Even in old cases in which the abscess has steadily progressed and burrowed beyond the thigh, Dr. Chevasse recommends the lumbar incision in the first instance, and a subsequent opening where the pus is pointing.

The next best position to open a psoas abscess is above Poupart's ligament, by an incision similar to that made in ligating the external iliac artery. The transversalis fascia having been reached, the abscess is rendered prominent by pressure made from below, or, should this fail, a probe carried through a small opening made in the thigh where the abscess is pointing upwards under Poupart's ligament, will indicate the spot for a free incision. After the tubes have been inserted the orifice in the thigh closes. The opening in this locality, not being so dependent, affords a far less direct route for the free escape of the pus than the lumbar incision, and the tubes must be retained for a longer time.

That the views expressed by Dr. Chevasse represent the practice of the more advanced surgeons of Great Britain, is shown by the debate which followed the reading of a paper on this subject by Mr. Treves, at a recent meeting of the Royal Medical and Chirurgical Society, which may be found in the *British Medical Journal*, January 12, 1884. With the exception of Mr. R. W. Parker, who preferred opening the abscess above Poupart's ligament, the speakers were in favor of the lumbar incision as affording the shortest and most convenient route for efficient drainage. Besides the advantages already referred to, an opening in the loin admits of ready examination of the diseased vertebræ, and the removal of a loose sequestrum, if present, as happened in one of Mr. Treves's cases, or of carious bone with the gouge, as in an instance recorded by Boeckel, in 1882, in his brochure enti-

tled *Fragments de Chirurgie Antiseptique*. The latter operation is, however, rarely practicable, but it may be resorted to when the disease is circumscribed and superficial.

In addition to the lumbar incision, the speakers, including Treves, Bryant, Macnamara, and Marsh, generally favored an early operation to prevent the formation of a large collection of pus. Mr. Noble Smith alone opposed this view, since he trusted to complete mechanical fixation of the spine, through which he had seen good results. If no improvement ensued, he opened the abscess.

The antiseptic lumbar incision of spinal abscesses, which Dr. Chevasse attributes to Mr. Chiene, but which, if we do not mistake, was first done by König, is certainly based upon correct principles, and we doubt not that the future will prove its great service. To what extent the incision through the structures of the loin will add to the dangers, experience can alone answer. If, however, we base our deductions upon the antiseptic opening of pointing abscesses, the risks should not be great, as we find that of 28 cases of this nature recorded by LACHARRIÈRE in his *Thèse pour le Doctorat*, 1883, only 5 were fatal, and that 2 of these were scarcely attributable to the procedure.

INCOMPATIBILITY OF SULPHATE OF QUININE AND IODIDE OF POTASSIUM.

IN a communication to the Biological Society, M. RABUTEAU calls attention to the ill effects of iodide of potassium and sulphate of quinine, when administered together or at short intervals. These effects are, on the part of the digestive organs, anorexia, nausea, epigastric pain, colic, and sometimes vomiting; on the part of the general system, *malaise*, slowing and feebleness of the pulse, pallor, and a sense of fatigue. These results are due to the decomposition of the iodide and the liberation of free iodine. This decomposition takes place, not alone in the stomach, but goes on in the intestine also.

The same result occurs from the use of an iodide sophisticated with an iodate of potassium. Iodine is set free, and to the action of this is to be referred the local and systemic effects above mentioned.

ANAL FISTULE IN TUBERCULAR SUBJECTS.

IN a communication made to the Société de Chirurgie de Paris, and published in the *Compte Rendu Général*, January 2, 1884, M. JEANNEL gives the details of two cases of operation for anal fistule in consumptives, one being in an advanced stage, and the second in the early stage of the disease. In both the wound refused to heal, but the general condition of the patients was improved.

From a therapeutic standpoint, these cases would seem to be successes, and to dispel the widely spread fears which are entertained by the laity, as well as by the profession, in regard to surgical intervention in the class of subjects under consideration. That conflicting views are held as to the propriety of interference, is a fact well known to our readers. While some surgeons maintain that not only the local but the general condition is ameliorated, others of equal experience and reputation condemn the operation, basing their opinion upon its inherent dangers and upon the ill-effects produced upon the lungs by the suppression of a sort of natural issue. In point of fact, in some cases, the operation may prove to be both a surgical and a therapeutical success, that is to say, the wound may close, and the pulmonary symptoms improve. In other cases, the fistule refuses to cicatrize, and the pulmonary lesions may either undergo no change whatever, or be aggravated. Hence, the entire question resolves itself into one of indications. If the local suffering be slight, an operation should not be thought of; but if the local distress be considerable, it should be resorted to, even if there be little prospect of healing of the wound.

THE ANTI-VIVISECTION AGITATION.

IN the February 9th issue of the *Philadelphia Medical Times* is an editorial in favor of the American Anti-vivisection Society, which is there spoken of as devoted to the "restriction of vivisection," so-called, "within proper limits," and not its abolition. If this be so, the name of the Society is sadly wanting in definiteness. What are the proper limits, is, we presume, to be defined, of course, by a collection of sensitive ladies, some clergymen, and two or three doctors with exceptional ideas. What the most active and enthusiastic of them state in private, is that abolition is their ultimate purpose, and the fairness of their methods may be judged of by the public citation of Magendie's experiments made when anæsthetics were unknown, as arguments against the present use of animals, and as illustrations of the abuse of vivisection.

In England the restriction bill has resulted in practical abolition, and incessant efforts to pass a total abolition bill. The profession knows well what it would mean to yield to this absurdity. Suppose that we granted the present demand, where would be our future security? Could we expect a fate other than that which has fallen upon the profession in England? Years ago we offered to accept such a bill as has since been passed in Great Britain. Happily hysterical counsels prevailed, and the ladies concerned promptly refused any aid which did not concede total abolition. In England there was no real cause of complaint as to misuse of animals, but to-day, with restriction, physiologists

have to go to the continent to complete their researches, or, as is often the case, do their work in private and in defiance of a foolish law unfairly worked. Are we prepared for such a state of things?

We were invited by one of the physicians who spoke at the anti-vivisection meeting, which proved so dismal a failure as to numbers and as to any interest the speeches caused, to meet these good people in a just and generous spirit of accommodative sweetness of temper. But the very existence of such a society is a calumny. In the past, many of its members have waged a bitter war of gossiping slander on physicians of the highest class, and have not hesitated even, of late, to propagate the most absurd stories concerning institutions of medicine. For any truly valuable purpose—for any evil in relative proportion to the machinery set in motion to crush it—this society has as little reason to live as if it were organized for the suppression of cruelty to vegetables.

The hyperæsthesia of sensitiveness may come in a true sense to be perilously near to cruelty, and there is a form of conscience so morbid, as Wendell Holmes says, that it requires another conscience to prevent it from doing evil.

REVIEWS.

A Handbook of Hygiene and Sanitary Science. By George Wilson, M.A., M.D., F.R.S.E., Fellow of the Sanitary Institute of Great Britain, etc. With Plates. Fifth edition, enlarged and carefully revised. 12mo. pp. 512. Philadelphia: P. Blakiston, Son & Co., 1884.

We are pleased to notice the appearance of the fifth edition of this work, which has been enlarged and carefully revised by the author. Dr. Wilson's handbook has been before the public for a number of years, and has been very favorably received not only in England, but in this country; the best evidence of this fact being the repeated demand for a new edition. The work occupies an intermediate place between such rudimentary books as the *Health Primers*, and the more elaborate treatises of the class to which Parkes's *Hygiene* and Buck's *Hygiene* belong. It is alike useful to the general public, the physician, and to those engaged in the administration of sanitary affairs.

A rapid perusal of the pages gives evidence of careful revision and an effort to bring the work up to date. In other respects this edition is a great improvement over its predecessors. The introductory chapter has been completely remodelled, the treatment of subjects more strictly belonging to the domain of social science having been omitted, and in its place has been introduced an historical sketch of sanitary science from the earliest ages to the present time.

A serious omission in former editions has been supplied by an addition to the chapter on Dwellings of a section on the sanitary inspection of dwellings.

The valuable reports of Dr. Thorne have been made use of to enrich the section on hospitals for cases of infectious diseases. There has been a demand for information upon this subject, due to a growing tendency in sanitary administration towards the adoption of the wise plan of isolating cases of infectious diseases in separate pavilions, and the suggestions here presented will prove highly serviceable.

Due prominence has been given to the subject of vital statistics, which has been enlarged upon and treated in a separate chapter. In handling the question, all abstruseness has been avoided, the object being to furnish a practical guide to those engaged in the ordinary work of compiling statistics of births, marriages, and deaths.

The last eighty-two pages of the volume are devoted to a detailed statement of the duties of medical officers of health, and to an Appendix containing official memoranda and data for the guidance of sanitary officers. Whilst referring specially to practices adopted by the Local Government Board of England, it will not be uninteresting to those engaged in similar work on this side of the Atlantic.

The volume is printed in large, clear type, and on good paper, and has the advantage of a full index and an ample table of contents. It is decidedly English in character, but this does not detract from its great excellence.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 22, 1884.

The President, R. F. Weir, M.D., in the Chair.

TRIPLE AMPUTATION OF THE LEG.

Dr. A. G. Gerster presented a man, forty-eight years of age, on whom three amputations had been performed. At the last one the patella, and both condyles of the femur, together with a portion of the old cicatrix, which was attached firmly to the posterior surface of the condyles, were removed. About a year ago the man suffered from compound fracture of the ankle-joint, which was not treated antiseptically. A phlegmon developed, and it became necessary to amputate the leg. Both of the flaps, however, sloughed. Although the amputation was treated by the open method, Dr. Gerster attributed the sloughing to the bad condition of the patient's circulation, due to habitual alcoholism. As there was no covering for the protruding extremities of the bones, and it was expected that the cicatrix would become ulcerated, amputation was performed a second time at the knee-joint by another surgeon. Most of the long anterior flap after this operation also sloughed, and the result was a large cicatrix upon the posterior aspect of the limb, closely adherent to the bone, and the final amputation already mentioned was performed. Dr. Gerster presented the patient especially on account of one pathological observation. When he had laid bare the condyles by the circular incision, he found that, instead of close union of the integument having taken place with the articular surface, a bursa mucosa existed between it and the cartilage. The amputation having been ac-

complished, Neuber's deep sutures were employed, one drainage-tube was placed in the cavity from which the patella had been removed, and only one sublimate-sawdust dressing was necessary. Four weeks after the amputation the man was able to walk on the stump, and was discharged from the hospital. The wound at the amputation was quite extensive and irregular, and he introduced about eleven sutures to bring about contact of the walls of the cavity with the patella. The lining of the bursa quadricipis was also removed.

DOUBLE BOWLEGS; MCEWEN'S OSTEOTOMY.

DR. GERSTER also presented a boy, sixteen years old, showing the result of double osteotomy, according to McEwen's method, for bowlegs. Nine weeks had elapsed since the operation, and the case progressed without any complications. The operative wounds were treated with a small pad of iodoform gauze. The distance between the internal condyles was three and a half inches before the operation, and now they touched each other. There was considerable arterial hemorrhage on one side, and he was obliged to ligate the bleeding vessel *in situ*. The limbs were placed upon simple straight splints, and allowed to remain four weeks, when the splints were removed, a silicate of soda dressing applied, and the patient allowed to walk about on crutches.

DR. LANGE said that he saw the last patient before his admission to the hospital, and so far as he remembered it was a case of genu varum, and the principal deflection was as it is now. In the course of the tibia, he thought it would have been better if an osteotomy had been done below the tuberosity of the tibia.

DR. GERSTER said that some of the deformity was due to curvature of the thighs, and his purpose was to determine whether or not it was necessary to osteotomize both femur and tibia; but finding that the osteotomy of the femur corrected the deformity, he proceeded no further. Doubtless, there was a marked curvature of the tibia also, but he considered the result as a very fair one.

DR. POORE asked if the femoral curve was the most marked of the two.

DR. GERSTER replied that the tibial curve was the most marked.

DR. POORE remarked that in genu varum the deformity is due chiefly to the tibial curve, and he supposed quite probably one difficulty in correcting it in this case was the loose condition of the ligaments, and on this account it is very difficult to correct the curvature.

DR. GERSTER remarked that he had had no difficulty in correcting the deformity after the bones were snapped.

DR. LANGE remarked that there now existed a slight degree of knock-knee, and the curvature of the tibia remained.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, February 7, 1884.

THE PRESIDENT, R. A. CLEEMANN, M.D., IN THE CHAIR.

A YEAR'S WORK IN OVARIOTOMY.

DR. WM. GOODELL read a report of his cases of ovariotomy during the past year. (See THE MEDICAL NEWS for February 16, page 178.)

DR. A. H. SMITH felt that Dr. Goodell was hardly right in saying that in England desperate cases are rejected. In his own experience, while in England recently, several cases which were very desperate, and which would have been generally rejected here, were operated upon successfully, and were ready for discharge three weeks after operation. It occurred to him that the lower average temperature had much to do with the result. The thermometer is not allowed to rise above 65° F. in the room in which the patient is kept, and in Lawson Tait's cases it rarely goes over 60°, and never up to 65°. Perhaps this has a good effect in preventing hyperpyrexia. The English ovariotomists are also very careful in details, especially in preventing hemorrhage, and use an immense number of hemostatic forceps. Ovarian cysts are remarkably common in London.

DR. B. F. DAWSON, of New York, upon invitation by the President, spoke of the English ovariotomists, and alluded to what he had himself seen while on visits to England as to very desperate cases being operated upon. His own late experience had been so good that he was inclined to attribute it, as well as the good results of the English operators, to absolute painstaking in the most trifling details, with absolute cleanliness; not simply antisepsis, but the utmost care throughout every step of the operation. Among other things, a very large number of hemostatic forceps are used to secure each bleeding point the moment that bleeding commences. His own last six cases of laparotomy, performed this winter, two of which were very desperate in their character, have been successful, and the results, he felt, were largely due to the avoidance of any preventable hemorrhage and great care throughout all stages of the operation to prevent blood or fluid from the cyst escaping into the peritoneal cavity. This care is exercised throughout the "toilet of the peritoneum," and he always uses a flat sponge, as does Mr. Wells, inside of the abdominal walls, upon the intestines while introducing the closing suture, which is removed only when it becomes necessary to do so to twist the last wires,

He always uses napkins to fold over the edges of the abdominal incision to prevent the oozing from the edges escaping into the peritoneal cavity, or soiling the operator's fingers. He also enfolds the cyst in towels as it is withdrawn from the cavity, to guard against even a trace of fluid soiling the intestines or wound. He clamps the pedicle temporarily when possible, and places a napkin under the clamp before dividing and cauterizing it. Every adhesion that shows any risk of bleeding, is cauterized as soon as it is separated, even when ligated. Douglas's pouch especially is sponged out until the sponges come away absolutely clean. In a recent very desperate case, one in which Dr. Emmett expressed his sympathy with him as to its almost certain fatality, the operation occupied two hours and forty minutes; owing to painstaking observance of the above details, and although half of the uterus was removed and adhesions were numerous, calling for many ligatures and frequent use of the cautery, yet convalescence was uncomplicated and speedy.

DR. GOODELL remarked that the quotation in his paper, to which exception had been taken, referred to Mr. Tait. It was taken from a paper read last autumn before the American Gynecological Society by Dr. Sutton, who was with Mr. Tait three months. He (Dr.

Goodell) had seen about a dozen ovariotomies in Great Britain, and only one was a difficult case, and in that the patient died. There he had seen patients refused on account of their age, while in this country they are not. He had operated successfully in patients aged respectively sixty, sixty-one, sixty-two, sixty-four, sixty-five, and sixty-seven years, and some one in this city had a successful case in a patient over eighty-three. He had once operated upon a patient seventy-six years of age, of a long-lived family. This was before the days of antisepsis, and the patient died. He believes that minute attention to details is the chief element of success.

One important point is to make the abdominal incision sufficiently large to see every adhesion as it is separated, and to ligate or secure immediately every bleeding point. This requires a courage which it took him years to attain. He always observes Spencer Wells's method of placing a flat sponge beneath the abdominal walls when introducing the closing sutures. He does not like wire, but always uses carbolated silk sutures, each eighteen inches long. After all have been placed, the ends are twisted together into one strand on either side and caught in the bite of a pressure forceps. The lips of the incision are then widely separated, and a final search is made for any oozing, leakage, or accumulation of serum. The sutures are then rapidly tied, and the wound dressed. This final toilet of the peritoneum cannot be made when wires are used. He now believes in the use of a drainage-tube, but he had hard work to bring himself to the point of accepting it, as he still looks upon the tube as a foreign body—a necessary evil. He had once seen death caused in a healthy man by the simple perforation of the peritoneum, without wound of the intestine, by a small stiletto, and this had made him fearful of the effect of the presence of a drainage-tube. But he now considered that the peritoneum in the case of an ovarian cyst has by thickening and attrition lost much of its vulnerability, and does not resent slight causes of irritation. He occasionally resorts to the actual cautery at a black heat to stop bleeding from torn adhesions, but he prefers the pressure forceps, the ligature, or the application of Monsel's solution.

He thinks there may be some truth in Dr. Smith's idea concerning the effect of the low temperature of the operating and of the convalescent room. He was struck with the absence of ill results in one operation in London, by Dr. Bantock, of which he had been a spectator. The day was cold, damp, and foggy, and the operating room was chilly, the windows being open; but the patient promptly recovered. One case of his own, in which the extreme emaciation and prostration of the patient forbade postponement, was operated upon in severe winter weather; the steam-pipes at the hospital had been frozen over night, and although they had been thawed out, the temperature of the operating room was only 54°. In this case the cyst had contained colloid matter, and had burst spontaneously; all that could possibly be removed, was scooped, sponged, and washed out. Much remained behind, yet the patient recovered and afterward became quite fat. This operation was performed three years ago, both ovaries were removed, but another tumor can now be discerned in the abdomen. The patient being fat and also quite sensitive, it is not possible to determine accurately its character, but he hopes it is a pedunculated fibroid of the uterus, and not a malignant tumor.

DR. DAWSON requested Dr. Goodell to give his opinion respecting the management of the drainage-tube, and of the importance of the spray.

DR. GOODELL said that, when operating in private houses, he has begun to dispense with the spray. Carbolic acid spray poisons some patients, and he, being afraid of it, only uses it when he does not consider it safe to omit it, as, for instance, in a general hospital, or where there are many spectators present. Year before last, he lost one patient from its use; she had contracted kidneys. Only last week in a case operated on in the Hospital of the University, the patient was profoundly affected by it and was with difficulty restored by means of digitalis, stimulants, etc. Where he omits the spray, he uses the drainage-tube more frequently. If he finds in Douglas's pouch, after the sutures have been placed and the sponges removed, two or three drachms of bloody serum, and the source of this oozing cannot be found, he inserts a drainage-tube; and he also uses it in all cases in which there has been peritonitis, or in which septic symptoms are present from a purulent cyst. Over the mouth of the tube he springs a piece of rubber sheeting, which is folded over a sponge squeezed out of a five per cent. solution of carbolic acid. The sponge is examined and squeezed out every few hours, and the tube moved slightly to clear the openings and allow any accumulation of serum to escape. As soon as a moderate amount of serum escapes without any tinge of blood, the tube is removed. This generally happens within forty-eight hours, but in one case it was necessary to allow it to remain five days. He never irrigates the abdominal cavity, but he sometimes introduces the long nozzle of a hard rubber syringe into the tube and draws out any serum that may have accumulated. When he operates in the country and leaves the patient in the hands of the family physician, he tries to avoid the use of the drainage-tube as much as possible.

DR. DAWSON had given some attention to the question of the drainage-tube. In New York two deaths had lately happened after ovariotomies, and in each case the surgeon had ascribed the fatal termination to the too early removal of the tube. Soon after these unfortunate cases he had operated, and had been obliged to use the drainage-tube; in the second and third days after the operation, the serum exuding from the tube was bloody. On the fourth day it was pure serum. The patient was doing well, and Dr. Dawson concluded to leave well enough alone, and, with the result in the two other cases before him, allowed the tube to remain. He used a wire with a pledget of absorbent cotton attached to the extremity, to soak out the accumulated serum, and continued to use fresh pieces until they came away clean. The tube was evidently being walled in by a deposit of lymph around it. On the sixth day, after finding very little serum, the last pledget of cotton brought away a little yellow spot that might have been either lymph or pus. That night he discovered another trace of the same appearance, and the microscope showed it to be pus. The next day the discharge was fetid. A saltspoonful of iodoform was put into the tube every time it was cleaned, and on the tenth day it was removed and a roll of absorbent cotton saturated with

iodoform was put in its place. This was replaced in a few hours with another until all signs of pus ceased. The opening closed in forty-eight hours. The patient recovered. He would like to ask if Dr. Goodell had ever regretted removing a drainage-tube too early? Is a drainage-tube more of a foreign body on the third or fourth day than it is on the first?

DR. W. H. PARISH had recently performed abdominal section for the removal of a fibroma of the uterus. In this case he used a drainage-tube, although he was not able to pass it down into Douglas's pouch. On the third day, he noticed that the serum escaping from the tube was cloudy and had a slight odor. On the fourth day, the odor was quite objectionable, and as the tube had evidently become separated from the abdominal cavity by the formation of a canal of lymph around it, resembling in appearance diphtheritic membrane, he decided to withdraw the tube. He washed out the canal with a two per cent. solution of carbolic acid. The canal soon closed and there was no return of the offensive odor.

DR. GOODELL could not recall the loss of a case after the removal of a drainage-tube. He has had, however, a number of deaths while the tube was still in position, but that meant simply that the cases were complicated and difficult ones. Was not the tube itself the cause of the pus in Dr. Dawson's case? Air containing germs was, of course, admitted into the tube in the cleaning-out process, and these germs would cause decomposition of the lymph. Might not also the tube, acting as an irritating foreign body, cause pus? He introduces a stitch in such a manner, beyond the drainage-tube, as to make tension of the skin around the tube, and this closes the opening as soon as the tube is withdrawn. He has occasionally followed the removal of the glass tube by the introduction of a rubber one of smaller calibre, but he has discontinued this practice believing the glass tube to be the least irritating.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, February 18, 1884.

THE PRESIDENT, WILLIAM DETMOLD, M.D., IN THE CHAIR.

A paper was read by DR. E. G. JANEWAY on

THE ETIOLOGY OF TYPHOID FEVER.

(See page 212.)

At the conclusion of the paper, Dr. Janeway said that he had intended, had time permitted, to make some inquiries in regard to the danger of contracting typhoid fever from water more or less contaminated with sewage; he had intended to institute more inquiries, similar to those which had been made on the Thames, concerning the relative prevalence of the disease in the cities of Troy and Albany. The sewers of Troy all emptied into the Hudson, and Albany, which was situated six miles lower down, derived its water-supply from the river after this sewage had been poured into it. In England it seemed to have been demonstrated that water which was contaminated with sewage, even to the amount of one to twenty, became innocuous after flowing twelve miles. The explanation generally accepted was that during this passage the organic matter became oxidized; but if it was assumed that typhoid had a special bacillus, the failure of the water to convey the contagium of this disease would probably be explained that the bacilli have all been absorbed or destroyed by other organisms in the transit.

DR. AUSTIN FLINT, SR., thought that all must agree that the subject of the paper was one of great importance, as well as interest, and that it was most judicious to bring it before the Association at this time. At the present time it was universally admitted that preventive was of greater importance than therapeutic treatment, and typhoid fever was beyond doubt a preventable disease. Our ability to prevent it would, of course, depend upon our knowledge of its etiology. He had listened with great interest to the paper, and he agreed in the main with the writer in his conclusions.

There were certain points in regard to typhoid fever which were of great practical interest. In the first place, it apparently depended on a special cause, a cause which was capable of producing this particular disease and no other, just as the various eruptive fevers depended each on a special cause. Whether the disease was due to a specific germ or not, had not as yet been proved, but reasoning from analogy, it seemed altogether probable that it did depend on a microscopic organism, and in due time he did not doubt that it would be demonstrated beyond question. In the second place, was this special cause always derived from the body of a patient suffering from the disease, or could it spontaneously arise under certain conditions? He did not think that he was prepared to say positively that the first proposition was true; but, reasoning again from analogy, we could infer that the germ, which, for convenience, at all events, it might be called, always did originate from the body of a typhoid fever patient. It was by no means always possible to trace the origin of the disease in any given case, but neither was this always possible in diseases which were recognized by all as contagious, such as smallpox and scarlet fever.

In the third place, this special cause had been shown to be capable of preserving its activity for a very considerable period—at least two years. Again, it seemed to be well established that the germ was introduced into the system in two ways: first, through drinking-water, or other liquids diluted with water; and, second, by the inspiration of contaminated air. In this locality it was probable that, as a rule, it found an entrance by means of contaminated air. The Croton water came from a long distance, and in itself was practically free from the danger of typhoid pollution. The invasion of the disease could generally be traced to some defect in sewage, and this was why it ought to be prevented. Typhoid fever seemed to be increasing in New York, and this he thought was due in part to the present deficient water supply, as well as to the defective sanitary provisions seen in many houses. Under the circumstances, we could only wonder that the disease was not more prevalent than it was.

In every case of typhoid fever to which he was called, the physician should ask himself, What is the cause of this? and insist on making a thorough examination for the purpose of finding it out. In almost every instance the cause could be found, and he thought that it was the duty of the Board of Health to institute such an investigation in every case reported to them. Since in

this way some local cause could almost invariably be discovered, a great deal might thus be accomplished in the way of prevention. In regard to typho-malarial fever, he found himself a little at variance with the author of the paper. He thought that this was a good rule which ought to be preserved, and that we frequently had seen in New York the combination of the typhoid germ with a malarial element. Dr. Janeway looked at the matter from an anatomical standpoint, but he viewed it from a clinical standpoint. He admitted that the typhoid lesions were found after death, and admitted that in certain malarious districts a large number of cases of fever were sometimes classed as remittent which were in reality cases of typhoid fever, because the latter distease had before been almost unknown in the region. But, at the same time, there was a class of cases which were better designated under the name of typho-malarial than any other. This was comparatively a recent term, but many years ago the distinguished Dr. Drake, in his work on the diseases of the Mississippi Valley, had described the same thing, or a very similar one, viz., malario-typhus.

DR. HOCHHEIMER said that, as Dr. Flint had expressed the opinion that the Board of Health should make a thorough investigation as to the cause in every case of typhoid fever reported to them, he was very glad to be able to say that the Board had already been doing this all through the past season, and as he had been one of the sanitary officers employed in this work, he had acquired a very considerable experience with the disease, and had been enabled to obtain a number of facts in regard to its present character in New York which perhaps might prove of interest to those present. He had studied it not in a limited locality or in an institution, but as it existed in private families in various parts of the city, and he had found it marked by a number of peculiar features.

The question of typho-malarial fever was one that came up frequently, and in endeavoring to trace back the cause to which this designation was applied by the attending physician, it was found that in a great many instances there had been three or four cases of fever in the same family. The first case was often comparatively mild, and it being taken for granted that it was malarial in character, not infrequently no physician was called in. It lasted pretty constantly for about four weeks, however, and was characterized by many of the symptoms of typhoid fever. When the second case became developed the physician was sure to be summoned. At first he was very likely to pronounce it malarial fever; but when by the second or third week distinctively typhoid symptoms had made their appearance, in order protect his former diagnosis, he would perhaps say that the disease had turned into typhoid, and would call the case one of typho-malarial fever.

The disease, as lately seen in New York, was very different from the typical typhoid fever described in the text-books. In nine-tenths of the cases not half of the ordinary characteristic symptoms of the affection appeared. As to the sanitary conditions and the proximate cause, the fact was very noticeable that the central portion of the city, say from Sixth Avenue to Lexington Avenue, was almost entirely exempt from the disease; and when cases did occur in this district, they could almost invariably be traced to a source of origin outside of the city. The great mass of the cases was met with along the rivers, both on the east and west side of town. Whether the emptying of the sewers into the rivers had anything to do with this, he was unable to say; but, aside from this, in almost every single instance, some sufficient local cause for the disease could be found. In this connection, it was a point of practical importance to note that no case of typhoid fever occurred in a house where the school-sink was employed, except in one or two instances where the apparatus had been allowed to become filthy or was out of repair. When it occurred on premises with privy-vaults, it was found that either the vault was not ventilated or the ventilating pipe had leaks in it. Sometimes, also, cases were found on the fourth floor of houses where the ventilating pipes were carried to the roofs of rear houses, and just on a level with the fourth floor of the houses in front. When the disease was met with in houses provided with water-closets, it was generally seen on the upper floors, where the water supply was most imperfect and irregular.

As to the age of the patients, the youngest child that he had seen with the fever was twenty-two months old, and, as a rule, it never occurred in young children unless they had been exposed to the danger of infection for a considerable time. By far the largest number of cases was found in those between the ages of twelve and forty; while between those of forty and sixty there seemed to be a remarkable immunity from it. Persons beyond the age of sixty, however, were very frequently attacked. There was one important question on which he thought it was desirable that some light should be thrown. It was taken for granted that the disease could be propagated only by a special cause derived from those suffering from it, and yet was not contagious. He should like to know whether it was possible for it to be conveyed by anything else than the dejecta of a patient.

DR. JANEWAY, in closing the discussion, remarked that while clinically there might be some ground for retaining the word typho-malarial, he thought the use of the term productive of harm, because it tended to keep both physicians and patients from taking proper precautions in regard to the disposal of the dejecta, which was a vital point in the prevention of the spread of the disease. On this account, therefore, as well as from the anatomical basis, he objected to the name, and thought that in cases in which such a designation seemed appropriate from the clinical characteristics, it was better simply to call the disease typhoid fever with a malarial complication. As the term was now commonly used, some physicians seemed to understand by it a disease which was neither typhoid fever nor malaria, but a vague and indefinite sort of an affection with some of the characteristics of each; and as long as the autopsies showed almost invariably the characteristic lesions of typhoid fever, he thought it very unfortunate that such loose ideas should prevail in regard to the matter.

CORRESPONDENCE.

"A YEAR'S WORK IN OVARIOTOMY."

To the Editor of THE MEDICAL NEWS.

SIR: Under the above heading there appears in THE MEDICAL NEWS of February 16, 1884, an article from the pen of my esteemed friend, Professor William Goodell.

In this article he misquotes me (of course, unintentionally) in the following sentence: "Whilst a very distinguished and successful British ovariotomist does not remove very large tumors—those which may weigh from sixty to sixty-five pounds—with extensive adhesions," etc. The word "very" is a mistake. I said, "does not remove *many* large tumors," etc. However, I am not aware that this British ovariotomist ever refuses to remove a tumor because it is large. In three months I spent with him (Mr. Lawson Tait), he removed but one large ovarian tumor; but he twice did hysterectomy with fibroids weighing thirty-eight and forty pounds respectively; during this time he was constantly removing the ovaries and tubes, frequently operating twice a day. One of the above hysterectomies, after which the patient recovered, was refused by Sir Spencer Wells. Very few operators get a long line of the same sort of cases, but Mr. Tait has the longest line of ovary and tube cases, and the shortest line of big ovarian cysts, of any man I visited in Europe.

In regard to the paper my criticism is offered in all kindness and with no desire to find fault. Taking into consideration that eleven of his twenty-five cases were done in a general hospital, and ten at their own homes, his results are simply excellent, considering the circumstances under which he operated. But out of the eleven cases done in the general hospital only one died, while of the ten done at home five died. Here is a chance to draw a conclusion that "home" for ovariotomy is worse than "general hospital." In his private hospital four cases were done with three recoveries.

This fact in regard to "home" as a place for ovariotomy is just about up to my own notions. If I had my choice between home and a general hospital as good as that of the University, I would take the hospital, but there are very few such hospitals in this country, and this one is not yet old enough to do its worst in abdominal operations. Several things have struck me as certain in regard to ovariotomy and its statistics in this country. One is that so long as the operation is done by ones and twos over the land, in homes and general hospitals, very little progress in good statistics will be made. Another is, *that when we follow the example of Keith and Tait, and prefer private hospitals, free from all general surgery and all diseases, in which to do our operations;* and when the cases are sent to a comparatively few operators thus engaged (keeping entirely out of general practice and pathological work), *we shall get just as good statistics as Keith or Tait show, and our climate will be relieved of a bad name.* Ovariotomies are usually poor pay cases; but no matter, some better results than some of us can show must be gotten or else *we ought to stop operating.* Last summer I lost every case I cut. (See *Medical and Surgical Reporter*, Feb. 2, 1884.) I was just as careful as I possibly could be under the circumstances. I changed the circumstances to a *private hospital on high ground, excluded all spectators* (*save those interested*), and, as a result, *every case I have cut since* has recovered *without a bad symptom*, and this remark applies also to a case done two weeks ago (*now well*), in which I removed the ovaries, tubes, and uterus above the vaginal attachment.

Yours respectfully,

R. S. Sutton, M.D.

Pittsburg, Pa., February 18, 1884.

HYPOSULPHITE OF SODA AND CARBOLIC ACID IN SEVERE CONTUSIONS.

To the Editor of The Medical News.

Sir: In 1869, I was summond to see Frank Reeder, a laborer in a saw-mill, who had received a severe injury by a log carriage, weighing about three or four thousand pounds, falling on his wrist and hand, which were very badly lacerated, the belly of the flexor pollicis protruding through a slit in the skin about the size of a large nutmeg. He was suffering great agony. No bones were fractured. I used cold water dressing, and gave him one-fourth of a grain doses of morphia, without affording him ease. On the second day he was no better; fearing that gangrene would set in, I ordered the following mixture:

℞.—Sodæ hyposulphit., . . . ℥iv.
Acid. carbolic. crys., . . ℥ss.
Glycerinæ, ... ℥ij.
Aquæ, ... Cj. M.

Sig.—To be used as a lotion, and to keep a cloth on the wrist and hand well saturated all the time.

In half an hour after using it, he was completely relieved, and passed a good night without any narcotic, and from this time he went on favorably without any trouble whatever, and in six weeks had full use of his hand.

In 1870, I was called to see a lad, about eight years old, with oblique fracture of the humerus above the condyles; it was almost a compound fracture, the point of the humerus coming so near the surface, that it caused a blood-blister to be seen under the cuticle. He complained a good deal, and as I disliked to use narcotics in one so young, I gave a prescription for the same lotion, and it had just as happy an effect in this case as in the previous one.

As I live in a town where there are about fifteen hundred men, who gain their livelihood by working in saw-mills and lumber, there is scarcely a day in which I do not use this lotion, and have never been disappointed in its effects. I could give you case after case, but it would be mere repetition, so I think it useless.

I have used it in erysipelas, and in the eruptions caused by *Rhus tox.* and the poison ivy, with good effect.

D. C. Hewson, M.D.

Orange, Texas, January 26, 1884.

THE OFFICE OF ASSISTANT SURGEON-GENERAL.

To the Editor of The Medical News.

Sir: On January 29, 1884, a bill (S. 1307) was introduced by Mr. Logan, to abolish the office of Assistant Surgeon-General of the Army. With perhaps one exception, the passage of this bill would affect, more or less, the status and promotion of the officers of the Medical Corps of the Army, and it should, therefore, be of sufficient interest to the medical profession at large to make at least some effort to prevent its passage.

In 1874, thanks to the efforts of the medical press and societies, the condition of the Medical Corps was much improved by adding a number of Colonels and Lieutenant-Colonels to the department, and it is believed

that the same feelings and views which existed at that time still prevail throughout the country. The prospects of Medical Officers of the Army are by no means too brilliant, and to limit promotion by abolishing the grade of Assistant Surgeon-General seems unjust.

It is claimed that the office is useless, and confers but an empty honor upon the incumbent. Bnt how is it that the late General Crane held the office for almost sixteen years, and who will deny that he did not fill the position with credit to himself and to his country? If there was work, and good, honorable and useful work to be done for one of the most faithful officers the Medical Department of the Army ever had, the same work must still remain, and the claim that the office is useless is not well taken. It may be true that the position confers but an empty honor upon the incumbent, but there are, no doubt, some medical officers who have grown gray in the Army who would be proud to bear that empty title as a slight recognition of the value of the services they have rendered to the Union. If the Assistant Surgeon-General is not now required at the seat of the Government, why not give him control of the medical affairs of the division commanded by the senior General officer? But do not abolish the office. Give it to one of those men who helped to carry civilization to the far west before some of us were born, and who administered to our wants, and those of our fathers, on many a bloody battlefield of the war of the Rebellion.

Foreign countries honor eminent men of the medical profession by conferring upon them medals, orders, knighthood, and nobility. We have nothing else to give them than that highest of all gratitudes, the thanks of the Republic, and for military surgeons, possibly that more substantial recognition, increased rank and pay.

What are a good many of our higher military positions, in time of peace, but empty titles? But who would think of abolishing these offices without crippling the military establishment, of which the Medical Department is undoubtedly a most important branch.

Yours respectfully,

CADUCEUS.

NEW INVENTIONS.

THE UVULATOME.

BY ROBERT W. KNOX, M. D.,
OF RICHMOND, TEXAS.

CLIPPING the uvula is one of the most common and simple of minor operations. Nevertheless, every practitioner encounters some difficulty in avoiding spasm, seizing the elongated organ, and severing it at the desired point. Indeed, with the ordinary methods, the uvula is usually clipped while in motion, and consequently it often occurs that the muscular substance is divided when the elongation is due, *not* to hypertrophy, but to the exuberant mucous membrane. When cut in this way, with scissors and forceps, the stump will be longer on one side than the other.

In order to avoid this last-named condition, and to facilitate the performance of the operation, I have devised the instrument here delineated. The handles are made long and curve upward when in position, thus facilitating an easy view of the throat. The special claim for the instrument is in the receiver beneath each blade, which is so arranged that one passes within the other, and thus all interference with the blades is avoided. No portion of the uvula or soft palate need be touched, except at *the very instant* of excision. No tenaculum or forceps is necessary, the severed portion of the organ being caught and retained by the instrument. The instrument is so simple, acting like an ordinary pair of scissors, that it is free from the uncertainty of the complicated uvulatome made after the plan of Physick's tonsillotome.

In addition to my own satisfactory experience with the instrument, it has elicited the approval and commendation of my friend, Prof. Dudley S. Reynolds, of Louisville, Ky., whose wide experience in laryngology entitles his expressions to special consideration.

This uvulatome was manufactured for me by Messrs. Tiemann & Co., of New York.

NEWS ITEMS.

CINCINNATI.

(From our Special Correspondent.)

CINCINNATI HOSPITAL.—The examination of candidates for the position of Interne to the Cincinnati Hospital, resulted in the appointment of Messrs. A. B. Phelps, J. Maloney, and F. W. Hendley, of the Medical College of Ohio; Messrs. R. Rover, B. J. Magee, and J. C. Oliver, of the Miami.

OHIO MEDICAL COLLEGE.—The annual contest for the prizes offered by Prof. W. W. Dawson, of the Ohio Medical College, occurred at the Good Samaritan Hospital a little more than a week ago. Prof. Dawson gives, each year, three prizes: one for the most expert bandaging, one for the best dissection, and one for the best anatomical drawing. The names of the successful contestants are withheld until the evening of the Commencement.

NATURE AND CAUSES OF CHOLERA.—A cablegram from Berlin, dated February 19, states that the German Sanitary Commission which was sent out to Egypt by the Imperial Board of Health to study the nature and causes, etc., of cholera, and which, after finishing its labors at Alexandria, was ordered to continue its investigations in India, has just forwarded a report from Calcutta, where it arrived some two or three months ago. The Commission discovered the cholera germ in a water-tank at Calcutta, and found in the suburban village, where the cholera appeared, the same microscopic organism which had been discovered in the lower intestines of cholera victims in Egypt.

YELLOW FEVER AT HAVANA.—Sanitary Inspector Burgess reports six deaths from yellow fever at Havana for the week ending February 9, 1884. He inspected

nineteen vessels during the week bound to United States ports, and disinfected those which had loaded at suspicious wharves.

MARINE HOSPITALS AT STATEN ISLAND AND MEMPHIS.—Mr. James, of New York, introduced a bill into the House last week, for the purchase of property for establishing a Marine Hospital on Staten Island, and Mr. Young, of Tennessee, for the completion of the Marine Hospital building at Memphis.

MEXICO WAKING UP.—It will be seen by the following action of the National Hygienic Congress, in session last November, as reported by Assistant Surgeon Main, that Mexico is falling into line, and now proposes to do something towards guarding her coast against imported diseases by establishing rigid quarantines, a measure always heretofore opposed by that country :

The Third Commission of the National Hygienic Congress has presented an extensive *Dictamen*, the result of which is to provide for the establishment of lazarettoes in the Republic. The document contains the following propositions:

1st. Quarantine stations to be established and built in all ports, for coasters and vessels of the high seas in the Republic,

2d. In the ports where it is possible to do so, the lazaretto shall be constructed upon an island; if not possible, it shall be on the mainland, at least two kilometres distant from any population, and in a contrary direction to the prevailing winds with respect to the port.

3d. But in its construction the following conditions should be observed :

a. To be built upon a vegetable soil, when practicable, beneath which may be found an impermeable subsoil, and with sufficient declivity to facilitate drainage.

b. It should not be near a mountain ridge or other eminence that may in any degree impede the free circulation of the prevailing winds.

c. It should have at its undisputed disposition a sufficient supply of living and potable water.

4th. Each lazaretto shall consist of three departments; one for the sick, one for observation, and one for baggage and merchandise; and each one with its correspondent servants and employes.

5th. These departments should have the following conditions:

a. Proportionate capacity to avoid agglomeration.

b. Convenient orientation, locality considered; and so disposed and planned as to reap the richest benefits of the prevailing currents.

c. The distance between each department shall be at least two hundred metres; and the department of observation shall be first to receive the wind, by its relative situation, respecting the other departments.

d. The perfect non-communication between the three, and with the port.

e. The department for the sick is to be a model of St. Elol Hospital, of Montpelier, as nearly as may be in all respects.

6th. Persons in apparent health are not to be detained at Vera Cruz in the wards of observation, but are permitted to go at once to Oriyaba, and there suffer quarantine before going farther into the interior, unless it is desired to return immediately to the coast.

7th. This discipline is to be respected in other ports and infected places, provided the topographic conditions and means of communication permit it.

8th. All persons coming from places where cholera, smallpox, yellow fever, or pest, or any other infectious diseases exist, shall be submitted to the lazaretto regulation.

SURGEON-GENERAL HAMILTON BEFORE THE PUBLIC HEALTH COMMITTEE OF THE HOUSE.—Surgeon-General Hamilton, of the Marine-Hospital Service, by invitation, appeared before the House Committee on Public Health on Thursday, the 14th inst., to answer certain charges preferred against him by Colonel Waring, Secretary of the National Board of Health, viz., that he "he had been unskilful, injudicious, and unsuccessful in his quarantine work," and that "in his efforts to control public and official opinion he had been guilty of misrepresentation." To refute the first charge Dr. Hamilton read a letter from the Board asking him to give them the benefit of his experience in quarantine work, and such suggestions as to the course to be taken by the Board in carrying out the law; to examine the blanks and forms now in use by the Board; and to obtain such aid, counsel, and assistance as he might be disposed to furnish the Board. He produced another letter from the Board showing that their original regulations for the management of quarantine, which President Hayes failed to sign because so unskilfully drawn, were amended in accordance with his suggestions, and after passing through his hands were signed by the President. He then denied that he had made misrepresentations in seeking to control public opinion. He stated that the President of the National Board of Health had written a letter to Speaker Carlisle setting forth at length his grievances against the Marine-Hospital Service, and requesting the appointment of the persons he named as members of the Committee on Public Health. Dr. Cabell, who was present, stated that he had asked Mr. Carlisle to place men on the Committee who would attend the meetings and who took an interest in health matters, and that at the request of Mr. Carlisle he had put his application in writing, but disclaimed any intention of packing the Committee.

Several members of the Committee spoke upon the subject, Mr. Davis, of Mass., saying that he had been approached by Dr. Cabell at the Riggs House, who, finding he had served on the Massachusetts Board, said he would be a proper person to be placed on the Public Health Committee, and asked him if he would serve. He answered declining; he was then asked, if appointed, would he serve, and that he told Dr. Cabell he hardly thought he would decline if the Speaker appointed him, but that if the Committee now saw fit he would tender his resignation. Dr. Hamilton said he did not believe the Committee had been packed, but he wanted to show the attempt had been made. He said, however, that Dr. Smart, Secretary of the Board, had packed the Public Health Association, at Indianapolis, and produced the circular letter addressed by Dr. Smart to members of that Association. He characterized these plans of the Board as "injudicious."

Dr. Hamilton defended the quarantine management by the Marine-Hospital Service, and produced affidavits and statements from citizens in various towns of Texas,

together with a letter from the Governor, approving the work. He then spoke of the management at Pensacola by the National Board, through its protégé the old Pensacola Board, and stated that the latter had been presented for negligence and maladministration by the Grand Jury. Also, that the National Board approved a requisition for $2000 from Pensacola after the epidemic had disappeared, which money was divided up among friends of the Board. If not dishonest, this was at least "injudicious." The sinking of several vessels of the "Mississippi fleet" by the nautical member of the Board, was characterized as "unskilful." He then laid the responsibility of the Pensacola epidemic of 1882 at the door of the Board, who through its protégé let the disease into that city. He showed that Colonel Waring, its present Secretary, had been employed by the Board to investigate and write essays on sewer-traps, etc., at the time that gentleman held patents on that very subject, reading a list of said patents to the Committee. He considered this "injudicious." He showed that Dr. Verdi, a member of the Board, had been paid $300 for an eight and a half page essay, three and a half pages of which were made up of an editorial taken from the London *Times*, and figures from the Bureau of Statistics —also "injudicious." There was much more of the same sort of material brought forward by Dr. Hamilton which our limited space will not permit us to give, and he informed the Committee at its adjournment that he was not nearly through. He has been invited to continue his argument at its next meeting.

ARMY MEDICAL OFFICERS.—A bill was reported favorably last Tuesday by Senator Logan from the Committee on Military Affairs, to define the title and duties of certain officers of the Medical Department of the Army. It provides that that department shall have two grades of officers, one grade to be known as assistant surgeons-general with the rank, pay, and emoluments of colonel, and another, to be known as deputy surgeons-general, with the rank, pay, and emoluments of lieutenant-colonel.

TO COMPENSATE AN ARMY SURGEON.—The Senate last Tuesday passed a bill to compensate Dr. Edward P.Vollum, Surgeon, United States Army, in the sum of seven hundred dollars for loss of personal effects by wreck, in 1856, of a vessel on which he shipped as a passenger under detail from the Secretary of War.

VIVISECTION IN GERMANY.—At the request of the Minister of Public Instruction, the Medical Faculty of Berlin has recently given the following opinion as to the necessity of vivisection: That vivisection is necessary for investigation and instruction, and that without it no further advance in physiology is possible; nor can that opinion and judgment be acquired by the students which is only to be arrived at by an insight into the performance of the important functions of life. Furthermore, a series of experiments on animals is necessary and indispensable for medical instruction if the laws of nerve-conduction, digestion, circulation, etc., are to be effectively understood; and their comprehension by the physician is necessary to enable him to check hemorrhage, or perform any other operation which is necessary for the restoration of health. But especially, in later years, does the science of medicine owe to experiments on animals much of the light thrown on the causes of human disease, as well as upon the means for preventing them. The proper disposal and disinfection of excrementitious matters would also be impossible without these experiments. Experiments on animals are therefore of enormous importance and great value for the State and society, as well as for science.

To this paper are signed the names of Du Bois-Reymond, Virchow, Westphal, Liebreich, and other distinguished scientists.

THE PROPOSED NATIONAL PHARMACOPŒIA.—*The Journal of the American Medical Association* says of the bill recently introduced into Congress for the publication of a *National Pharmacopœia*, that "the method of supervision and preparation provided in the bill secures as much freedom from local and partisan influences, and imparts to it as much of a truly national character, as is possible, while the publication by the government removes it entirely from the field of financial strife or competition. We hope individual members of the profession in every State will use what influence they have with their representatives in Congress, promptly, in favor of the passage of the bill."

THE INTERNATIONAL HEALTH EXHIBITION.—The outline of the International Health Exhibition, to be held in London this year, includes six groups, and extends to sanitary appliances for schools, workshops, dwellings, food, dress, and in all to about sixty classes in detail. There will be held with it an International Congress on Health and Education. The Hygienic Exhibit at Berlin last year was visited by nearly a million of people, and proved a financial success, notwithstanding the fire which consumed the first building.

NEW JERSEY STATE BOARD OF HEALTH REPORT.—The seventh annual report of the New Jersey State Board of Health has valuable articles on "School Hygiene," "The Protection of Schools from Contagious Diseases," on "Health Resorts," "Kerosene," "Malt Beverages," "Milk," "The Care of Homes," and on "Modes and Places of Interment." A list of all physicians who have registered under the law of 1880 and its supplements, shows about 1800 practitioners in the State, with all forms of diplomas, certificates, and licenses.

THE SEWERAGE SYSTEM OF BOSTON, as recently completed, was first outlined in 1875, and has been chiefly executed by J. P. Davis, C. E., and his engineering staff. The plan is that of intercepting sewers and pumpage. The pumping station is at Old Harbor Point, and Dorchester Bay is crossed by a tunnel. The whole is constructed after the most careful details, and Boston will no doubt be greatly benefited by a system, the guiding formula of which is, "The sewage shall pass in a continuous current from the houses until it reaches its destination in deep waters far away."

FOOT AND MOUTH DISEASE is very prevalent in Great Britain. The whole number of animals attacked for the year ending December 31st, is given by Fleming's *Veterinary Journal* at about 440,000. The disease has arrived here two or three times by importation, and once within a year at Philadelphia, but was quickly

recognized and isolated. We have recently seen two animals inoculated with the disease for experimental purposes.

GLANDERS has again broken out in the South Orange car stables, near Newark, N. J., although the State has a special law requiring the destruction of diseased horses, and over sixty in this stable have been killed.

GASTROSTOMY IN THE SEVENTEENTH CENTURY.—MR. JAMES DIXON, in a communication to the *Medical Times and Gazette*, February 2, 1884, states that on July 9, 1635, Daniel Schwaben opened the stomach of a male and removed a knife which he had swallowed. No attempt was made to close the wound in the organ, which is described as spontaneously shrinking together. The external wound was closed by five sutures, and a poultice was applied. Soup was taken by the mouth on the day of the operation, and a powder administered. The patient recovered and lived several years.

DR. WEIR MITCHELL is the author of a story now appearing in *The Atlantic Monthly*, which has a medical interest.

A RECEPTION TO DR. PARVIN.—The Alumni of the Jefferson Medical College gave recently a reception to Prof. Theophilus Parvin, at the St. George Hotel, Philadelphia.

"THE DWELLINGS OF THE INDUSTRIAL CLASSES IN LIVERPOOL," "The Rehousing of Outcast Glasgow," and "The Homes of the Poor in Dublin," are subjects of valuable papers in the *Sanitary Record*, by Drs. Forwood, Stoddard, and Cameron. They show what wonderful sanitary and moral blessings have resulted from the removal of whole streets of rookeries, and from the model lodging-places and other tenements.

VITAL STATISTICS OF PARIS.—The quarterly summary of the Bureau of Vital Statistics of Paris, for the quarter ending December 31, 1883, shows the work done by the Night Medical Service during that time. The total number of patients receiving medical attention was 1773, and the average number of visits per night was 1937. Of the patients, 34 per cent. were men, 51 per cent. women, and 15 per cent. children under 3 years of age. Among the patients visited were 226 cases of labor; diseases of the respiratory system, 264 cases; diseases of the digestive system, 148 cases; diseases of the nervous system, 333; accidents, 149. Among the number, 50 were reported dead before arrival of the physician.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending February 9, 1884, indicate that typhoid fever, tonsillitis, intermittent fever, diarrhœa, and measles have increased, and that remittent fever, erysipelas, and inflammation of the bowels have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending February 9, and since, at ten places, scarlet fever at fourteen places, and measles at ten places. One case of smallpox was reported in Bath Township, Clinton County, February 10.

NOTES AND QUERIES.

THE ENDORSERS OF THE NEW CODE.

To the Editor of THE MEDICAL NEWS.

SIR: In the last number of your Journal, it is stated editorially that "Dr. Roosa is reported to have said that letters had been received from the best men of many States, urging New York State to stand firm in shaking off the shackles of the so-called National Association, and promising that other Societies would follow the example."

A regret is then expressed that Dr. Roosa did not read those letters, and you also state that the *Record* had not been willing to produce letters which its editor had received, endorsing its course "in its advocacy of freedom in consultations," but the hope is expressed that the letters to which Dr. Roosa referred "may not share this sad fate," but "yet see the light of day."

In answer to all this, or to that part of it which concerns me, I beg that you will allow me to say: *First.* That for this time I am reported by THE NEWS with entire correctness, both as to letter and spirit. *Second.* The letters to which I alluded, cannot be produced and published at the call of THE NEWS, because they are private letters. In my opinion, to publish them would be to violate a code which I hold very dear; the unwritten code that obtains among gentlemen. *Third.* To publish these letters would be to invite for the writers the same kind of attacks upon their integrity and motives, that have been so persistently made upon those who have "thrown off the shackles" of the Judicial Council of the American Medical Association.

When the writers of those letters are ready to face the persecuting spirit which dropped the name of Alfred C. Post from the roll of the American Surgical Society, and which in New York City impotently threatened to boycott and ostracize the opponents of the Old Code, they will, undoubtedly, write and speak to the profession at large. Although I must decline to furnish you with the names of those who have written the letters for which you ask, I will say that the writers of them are prominent medical men in the States of Maine, New Hampshire, Connecticut, Massachusetts, Rhode Island, Pennsylvania, Virginia, Ohio, Missouri, North Carolina, and California. It also gives me much pleasure to inform you that I have indirect but reliable assurances from several well known physicians in Philadelphia, that they will, in due time, endeavor to induce the profession in that city to shake off the *Old Code*.

I am, sir, yours very respectfully,

D. B. ST. JOHN ROOSA, M.D.

20 EAST 30TH ST., NEW YORK CITY,
February 16, 1884.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 12 TO FEBRUARY 18, 1884.

PERIN, GLOVER, *Lieutenant Colonel and Surgeon.*—Medical Director, is granted one month's leave of absence with permission to apply at Division Headquarters, Missouri, for an extension of one month.—*S. O. 16, Department of Dakota*, February 9, 1884.

To be Assistant Surgeons.—With the rank of First Lieutenant to date, December 3, 1883. WILLIAM D. DIETZ, WALTER W. R. FISHER, WILLIAM STEPHENSON, ADRIAN S. PALHEMUS, JOHN L. PHILLIPS, REUBEN L. ROBERTSON, WILLIAM C. BORDEN, EDGAR A. MEARNS, GUY L. EDIE, WILLIAM D. CROSBY, WILLIAM L. KNEEDLER, CHARLES M. GAUDY, CHARLES S. BLACK, JAMES E. PILCHER, ALONZO R. CHAPIN, —*S. O., A. G. O., Washington*, February 11, 1884.

BREWSTER, WILLIAM B., *First Lieutenant and Assistant Surgeon.*—Resignation accepted to date, February 7, 1884.—*S. O., A. G. O., Washington*, February 11, 1884.

WILSON, GEORGE F., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort Walla Walla, W. T.—*S. O. 14, Department of the Columbia*, February 5, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

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ORIGINAL ARTICLES.

THE GEOGRAPHICAL DISTRIBUTION OF URINARY CALCULUS, WITH AN INQUIRY INTO ITS CAUSES.[1]

BY E. L. KEYES, M.D.,
OF NEW YORK.

IT is a fact universally recognized that stone occurs more frequently in certain portions of the world than in others, but a satisfactory explanation of the fact has not yet been established. It is customary to ascribe it to the hard waters of the affected districts; but investigation disproves the validity of such a claim. Agnew[2] states that in certain valleys in Lancaster County, Pennsylvania, of limestone formation, the water is very hard, being strongly impregnated with lime; yet calculus is not common in these valleys, and he joins former writers in the very apposite reflection that it is difficult to understand how calculi, most of which are composed of uric acid, should be stimulated into growth by the use of alkaline lime-water.

Civiale, whose statistic researches on this subject were very thorough, has written,[3] "Dr. Warren, of Boston, recently told me that stone is very rare in Massachusetts, and is almost unknown in those localities where granite rock abounds, while it is found occasionally at other points, where the soil is calcareous; but this alleged influence of the nature of the soil upon the production of calculous disorder is an hypothesis only admitted to explain facts, the true cause of which is not evident. Several of the localities from which I have received statistical documents possess the granite formation, yet, in spite of this, calculus is far from being a rare disorder there. I may cite among others certain points in Sweden."

Again, speaking of the stone cases reported from the Department of Var, in France, he says: "The malady seems to be equally divided among all classes of society. The nature of the soil, which is flinty and granite on the coast, and calcareous in the interior, does not appear to make any sensible difference in the distribution of the cases."

Cadge,[4] of Norwich, England, on the other hand, ascribes the great frequency of calculous—urid acid—disorders in the district to the hardness of the waters. Prout distinctly states his belief that hard waters are a factor in the production of stone, and many excellent urinary pathologists and practical surgeons agree in this way of thinking. Reginald Harrison[1] tries to explain it on the ground that hard waters interfere with digestion, and in that way modify the conditions of the solids in the urine and the state of the colloids. He adduces in support of his argument the frequency of stone in the bladder in the young among the poor about Norwich, and the fact that milk is scarce and dear, and quotes from the essay of Cadge that the frequency in this district of the occurrence of stone in children "will be found in strict accordance with the difficulty of producing milk."

In this connection, as to the liability of drinking-water to stand in a causal relation to calculous disorder, it is proper to call to mind a fact vouched for by Roberts,[2] and only to be explained on the ground of coincidence, or of cause and effect. He says: "The suburban district of Hulme supplies considerably fewer cases of stone to the Manchester Infirmary since the pipe-water has replaced the old pump-water supply."

It is proper also to refer in this context to a curious indirect means by which the drinking of water may prove a source of stone formation. Zancarol,[3] surgeon to the Greek Hospital at Alexandria, Egypt, states that the natives drink unfiltered Nile water, and imbibe the *Distoma hæmatobium;* that the animal and its ova can always be found in the urine, and among the layers of stone as extracted from the natives; and that the latter suffer frequently from calculous disorder. Foreigners, on the other hand, who drink only filtered Nile water, do not often have stone, and their urine does not contain the distoma or its ova.

Roberts[4] also ascribes the frequency of calculus in Egypt to the presence of the minute urinary parasite, the *Bilharzia hæmatobia.*

But to return to the water question, pure and simple, Mastin[5] takes the other side of the argument, showing that in Kentucky and Tennessee sandstone districts, where the water is very soft, calculous disorders are common, while they are just as frequently encountered in the limestone areas of the same region. Where hard water is drunk in Alabama, where stone is quite uncommon, Mastin says there have been only fifty to seventy-five operations performed upon the natives of that State since its settlement in 1817. Most of the cases have originated in a belt of country running east and west, and including Tuscaloosa, "a pure sandstone region with the softest and best water in the State." Mastin further adds in connection with the question of stone in Alabama: "The northern

[1] Read before the New York Surgical Society, February 12, 1884.

[2] Surgery, second volume, p. 631.

[3] Affection Calculeuse, p. 588, Paris, 1838.

[4] Transactions of the British Medical Association, 1874.

[1] Lectures on the Surgical Disorders of the Urinary Organs, second edition, p. 245, 1880.

[2] Urinary and Renal Disorders, 2d Am. ed., 1872, p. 274.

[3] Rev. de Chirurg., August 10, 1882, p. 645.

[4] Op. cit., p. 275.

[5] Causes and Geographical Distribution of Calculous Diseases. Transactions of the International Medical Congress, Philadelphia, 1877, p. 609.

and eastern sections abound in blue limestone, and the water is very strongly impregnated, yet we rarely, if ever, hear of a case of gravel or limestone within these limits. Again, in middle and southern Alabama, the base of the soil is what is known as "rotten limestone," and the water strongly alkaline; this is also the case in eastern Mississippi, and still we have been unable to obtain reliable information of even a half dozen cases of stone having ever occurred in these regions.

He cites also Dr. Guild, the leading surgeon of Tuscaloosa, as asserting that all his stone cases have come from the sandstone district, where soft water is used.

Therefore it seems fair to assume that whatever influence hard water may have in the production of stone must be exercised in some secondary manner, as by deranging the digestion (if it operates at all, which may be considered doubtful).

Probably no country is entirely free from areas in which stone formation is relatively prevalent, but the distribution of these areas seems to be arbitrary. Thus in England, where stone is quite common, the eastern counties of Norfolk and Suffolk appear to be most afflicted. It is noteworthy that as many cases occur each year in Norfolk among its 438,656 inhabitants (Cadge), as in all Ireland with a population of 5,412,377. The northern counties of Ireland and of Scotland furnish more cases than the remaining portions of those countries.

Calculous disease abounds in France, as Civiale has clearly brought out, in Teneriffe, in Iceland, in Egypt; it is also very common in Russia. Klein[1] states that cases of stone sometimes constitute a fifth of all the patients under treatment in the hospitals of Moscow.

Estlander,[2] on the other hand, shows that primary calculous disorders are almost unknown in Finland, the University Hospital case-books containing only one Finlander, with a stone originating in the kidney, during a period of forty-four years. There were cases of phosphatic stone with paralyzed bladders, etc. Civiale[3] notices a similar immunity in Christiania, where, out of thirty-two hundred and eleven patients in hospital during four years, only one had stone; while in the hospital of Gothenburg, in Sweden, a hospital of sixty beds, there had been no stone case since the existence of the hospital—a period of fifty years.

Fayrer,[4] a well-known authority upon medical questions in India, states that stone is very frequently encountered in the northwestern and central provinces of that country; five hundred and fifty-four cases were cut for stone during a single six months in 1863. In Lower Bengal stone is rare. Fayrer[5] says that lithotomy had been performed only about one hundred times in the Medical College Hospital up to 1873. Harris[6] confirms the fact as to Bengal, and ascribes the prevalence of the malady in the northwestern provinces to the cold winds which blow from the Himalayas, and to a heavy unfermented bread used by the natives. Dr. Garden's testimony from the Sarahunpore Dispensary is corroborative of the frequency of stone in India. Mastin[1] refers to Curran for authority in stating that Hindostan is exceptionally rich in stone cases. Vandyke Carter[2] speaks for Bombay and the great prevalence of oxalate of lime calculi in that region. He thinks that stone is more common in Bombay or western India than in the southern or Madras Presidency. Mr. Dudgeon,[3] of Pekin, who succeeded Kerr in China, informs us that in China, at Canton and Takow in Formosa calculus is found, but apparently not elsewhere. At Pekin the water is full of lime; at Canton very soft. Kerr[4] also states that Canton furnishes the stone cases of China, the missionary hospitals of twenty years' existence in Ning-Po and Shanghai, and at Pekin and Hangkow for eight years, having supplied attendance to thousands of patients, but not to a single case of stone. The Rev. P. Parker, it appears, founder of the Medical Missionary Society, performed the first lithotomy of which there is any modern record in China.

In Norway, Sweden, Denmark, Syria, and Spain stone is not very common. In France and Holland it is abundant. In Austria, Germany, Italy, Persia, and Syria it is reasonably frequent in occurrence.

In Mexico, Central and South America, and Australia, so far as known, the disease is not common. Livingstone failed to find syphilis or stone among the natives of Central Africa.

In North America, in the United States, the greatest number of stone cases originate in the central districts—Tennessee, Kentucky, Ohio, Indiana, Missouri, Western Pennsylvania, and Virginia. In Utah it is said to be common. Authorities differ as to Georgia and North Carolina. In the Northern, Eastern, Gulf, Southern, and Western States calculus is uncommon, as it is also in the Canadas and British possessions.

These inequalities of distribution are not satisfactorily accounted for by any peculiarities of race, food, habits, soil, climate, temperature, or water.

I am speaking of primary acid stone formation; secondary phosphatic stone, due to obstructive and catarrhal maladies of the genito-urinary tract, or to the presence of a foreign body, is found equally in all climates and in all conditions of life provided only the proper etiological factors are present locally in the individual.

Why, then, does the fact exist that certain portions of the earth's surface are more fertile in stone cases than other portions?

Race may have something to do with it, even under the same conditions of climate, etc. Gross,[5]

[1] Ueber die Steinkrankheit und ihre Behandlung. Archiv f. klin. Chir. Bd. vi. S. 78.
[2] Trans. Int. Med. Cong. Phila., 1877, p. 663.
[3] Affection Calculeuse. Paris, 1838, p. 580.
[4] Referred to by Coulson, Dis. of Bladder, etc. 6th ed., p. 378.
[5] Clinical and Pathological Observations in India, 1873, p. 385.
[6] Indian Annals of Med. Science, 1868, No. 23, p. 20.

[1] Loc. cit., p. 618.
[2] Calculous Disease in Bombay. St. George's Hospital Reports, 1871–2, p. 83.
[3] Calculus in China. Med. Times and Gazette, Sept. 2, 1876, p. 252.
[4] New York Medical Journal, 1871, p. 365.
[5] Op. cit., p. 168

among the lithotomies reported during a certain period in different Southern States of mixed population, found the proportion to be one negro to six whites. Rayer states that the negro escapes in Egypt, while the Arab suffers. Mastin[1] has collected three thousand and thirty-nine reliable lithotomies in America, and finds only one hundred and two put down to the negro and thirty-one to the mulatto. Mastin further notices that gout is very rare among the black people in the United States, and he quotes Winterbottom as vouching for the same fact for the native Africans around Sierra Leone. These statements appear to have a direct bearing upon the question. Reports like those of Livingstone concerning the negroes of Central Africa are not in point, since the districts did not contain a population of mixed races for comparison.

Climate.—That climate alone should influence stone formation seems improbable. There is no striking analogy of climate between Moscow and Kentucky. Temperate zones seem to be most afflicted, yet the cold winds of the Himalayas and the general boisterousness of the winds about Norwich, England, have been accused as contributing to the stone tendencies of those regions. The central districts of the United States, however, are not preëminently windy. In France, Civiale found the proportion of cases in the Var district the same inland and on the coast. The New England shores are subject to dampness and boisterous northeasterly gales, yet the calculous malady is not common there. Soldiers and sailors are reported by all who have given attention to statistics to be remarkably free from stone, yet their life is surely one of exposure, and the reason for their immunity must rather be set down to the fact that most men practising those professions are between the ages of twenty and forty—a period of life most exempt from stone.

Social Condition, *Habits*, and *Occupation* are not paramount as etiological factors of stone, although they have a certain bearing upon it. Civiale distinctly states that, in his collections in France, social position made no difference in the relative number of cases found in a certain district. Undoubtedly there are more stone cases among the poor than among the wealthy; but the latter class is very small in any community, and nearly all the cases of the poor go to the hospitals for operation, where they are sure to be recorded, while the wealthy escape tabulation to a certain extent.

In New York there is very little tendency to stone formation. During nearly thirteen years' connection with active surgical work in the Bellevue and Charity Hospitals, I have found in my service only two cases of stone; all the others with which I have had to do in hospital have been sent in by myself from outside. By far the greater portion of stone cases which I have had to do with have been found among patients in easy circumstances; but this, of course, is accidental, and by no means indicates that more wealthy than poor people have stone in New York.

[1] Loc. cit., p. 618.

Thompson,[1] however, remarks that he does not "know any disease which marks more distinctly or more curiously its relations with class than this. So common is stone in the children of the poor, comparatively speaking, that at Guy's Hospital, surrounded as it is by a very large neighborhood, densely populated by some of the most badly nourished classes of the community, quite one-half of the cases admitted are children. Among the same classes, however, it is rare at the other end of life, very few elderly workingmen in London being afflicted with it. On the other hand, among the well-to-do and well-fed, while almost never found in childhood, it is comparatively common in advanced age."

Alcohol.—It is doubtful that alcohol will produce stone without other predisposing agencies. In large cities alcohol is consumed freely; but no statistician has noted a special prevalence of stone among adult dwellers in cities over the relative average among the natives in the surrounding counties. An abundance of liquor is consumed in Scotland and in Ireland; doubtless as much as, or more than, in England, yet the latter locality is the favorite one for stone. Some wines, like Rhine wines, as Sömmering has pointed out, being charged with bitartrate of potash, rather militate against tendencies to stone; but sweet, fermented wines, champagnes, and malt liquors, since they increase the tendencies toward uric-acid formation, undoubtedly aggravate any predisposition to stone formation which may already exist.

Food alone cannot materially promote stone formation by its quality, although, where the tendency exists, it may be intensified by the quality of the food. Thus, in India, Vandyke Carter found oxalate of lime nuclei among the calculi of the rice-eating natives; but it is not starch as food that causes stone, or the potato-eating Irishman would be prone to it, which is not the case; nor is it rice-starch, or the Chinaman would be as constant a stone producer as the Indian, which again is not the case.

In Europe and America, uric acid stones are the rule; but if a meat diet caused stones, the latter would be much more common in cities, where much meat is consumed, than in the surrounding country, which again has not been noted as a fact.

Abundance of milk as a diet has been supposed to avert tendencies to stone, and probably this is true, but alone it is an insignificant factor. Indigestion again has been accused as causing stone formation, but if indigestion alone were a main cause, surely the disease ought to be rampant in New England, where hot bread, pie, and rapid eating, with accompanying bad teeth and dyspepsia are the order of the day among the people—and yet stone is very rare in New England. A possible reason for the relative frequency of oxalate of lime in the calculi of India, may perhaps be found in the well-known disturbances of the liver which are said to be common in that climate, the cause of

[1] Clinical Lectures on Diseases of the Urinary Organs, sixth edition, 1882, p. 67.

oxaluria being often, in this country at least, associated, if not identical, with functional hepatic disturbance.

Constitution.—It is probably not doubtful that gout and rheumatism increase any existing tendency there may be to stone formation, because these diathetic conditions are accompanied by acidity of the urine, as a rule, with a tendency to abundant excretion of uric acid, urates, and the like. A gouty individual, leading a sedentary life, drinking beer and champagne, and eating a highly nitrogenized diet, especially if he does not exercise, has a little dyspepsia, and is constantly kept anxious about his business, is exactly in a fit condition to form stone easily. Cases of kidney colic with the passage of small acid concretions are constantly furnished by this class of individuals.

Allowing then, if the foregoing representations are accurate, that water, climate, soil, occupation, exposure, digestion, alcohol, and food are not responsible for the geographical distribution of stone, granting some weight to race and social condition, and considerable influence to the rheumatic diathesis, what factor remains to be considered, for surely these alone are not entirely sufficient?

The only one which seems capable of filling up the gap is heredity.

As gout is hereditary, so are the tendencies to stone. I have, at present, under observation a family in which three generations, all living, have strong and constantly outcropping tendencies to the appearance of fine, uric-acid gravel. The baby of four years, and the grandfather of seventy, manifest it about equally. Mr. William Cadge,[1] in discoursing recently to the Norwich Medico-Chirurgical Society about a woman with sacculated bladder and stone, mentioned that the patient's father had died after lithotrity, and that her brother, living in Buckinghamshire, was then said to be suffering from stone.

The most celebrated recorded instance of inherited tendency to stone, so far as I am aware, is that reported by Mr. Clubbe,[2] of Lowestoft, where six children all had stone, the father and mother passed quantities of uric acid, the grandfather, grandmother, great-uncle, six uncles, four aunts, and a cousin, all had had attacks of gravel, or had been cut for stone.

It seems to me not very improbable that hereditary tendency lies at the bottom of the regional distribution, and largely accounts for the peculiar geographical localities of stone. Generation after generation growing up in the same region of country and intermarrying would naturally reproduce and intensify any such physical trait as a tendency to stone. I am aware that it has been claimed that strangers going to Norwich have developed stone, having shown no tendency to it in their own land; but it would take a large array of such facts to constitute anything more than a coincidence.

In former years of slow locomotion, the few who emigrated married others with different tendencies, and so failed to spread the habit, or married others with like tendencies, and thus established new areas of stone formation.

Food, drink, and surroundings may have intensified or modified these natural tendencies more or less, but that the essence of the geographical distribution of stone (primary acid stone) lies in intensified and reduplicated hereditary predisposition seems to me at least plausible in lack of a better general explanation.

With modern improvements in rapid transit, and facility and cheapness of locomotion, it seems at least possible that the centres of stone formation may be somewhat broken up, and by more general and mixed marriages the disease become more extended in geographical area, but less active.

[1] Lancet, January 5, 1883, p. 6.
[2] Hereditariness of Stone, Lancet, February 10, 1872, p. 204.

NEURALGIA OF THE NOSE AND PHARYNX.

By LOUIS JURIST, M.D.,
INSTRUCTOR IN LARYNGOLOGY AND RHINOLOGY, POST-GRADUATE COURSE, AND CLINICAL CHIEF IN THE LARYNGOSCOPIC DEPARTMENT, JEFFERSON MEDICAL COLLEGE HOSPITAL.

In looking over various works treating of the neuralgiæ in general or in detail, the entire neglect of nasal and pharyngeal manifestations, or the greatest variation of opinion concerning them, was immediately apparent.

Dr. Anstie describes a "rather common and extremely troublesome" form of pharyngeal neuralgia, occurring usually in hysterical females, accompanied by one or two painful points in or behind the tonsil, pains radiating into the tongue and along the course of the carotid, with the accumulation of much thick mucus and reflex muscular movements. Dr. J. Solis-Cohen considers the affection "rare and its causes obscure." Dr. Morell Mackenzie quotes Tuerck as describing six cases, but thinks some of them approach more nearly to simple hyperæsthesia. He himself has seen many instances of the disease in women between the ages of twenty and forty, gives no detailed account of the symptoms, praises scarification should there be hyperæmia, and recommends the local use of tincture of aconite in all cases. Dr. Elsberg, in an essay on "Sensory Neuroses of the Throat," states that he has met with nine cases of neuralgia in fifty-eight of sensory disturbance, and adds that "true neuralgia unquestionably occurs."

My own experience is limited to the following five cases, with a sixth still under observation. I am inclined to believe that Drs. Mackenzie and Anstie considered the morbid sensations so often complained of by women as typical neuralgia, or they would hardly have spoken of them as "common" or "troublesome." True neuralgia, especially of the earlier periods of life, can be relieved or controlled; subjective nerve symptoms depending so often upon the mental state of the patient, yield but slowly, if at all, to our best-directed efforts.

CASE I.—Mrs. A. C., æt. 40. Her hereditary history is excellent, and she claims to have been in good health until some years after marriage, when

she had become much reduced in strength by a quick succession of pregnancies and overwork. She has suffered for the last six months—she applied to me in December, 1882—with frontal pain and earache, fulness in both nostrils and darting pain in the post-nasal region. There was no discharge. Examination showed a reddened, tumefied nasal mucous membrane. The use of the probe caused sneezing and an increase of pain in all the parts complained of. There was tenderness in front of the ear, and at the emergence of the supra- and infra-orbital nerves, but the region over the frontal sinus was insensitive.

CASE II.—Miss A. B., æt. 15, anæmic and extremely nervous. Hereditation good. She had an attack of chorea, due to fright, at the age of twelve, from which she recovered after three months' treatment. Menstruation set in at the age of fourteen, and has been regular ever since. She came to be treated for catarrh and earache of one month's duration. She complained of obstruction of the left nostril and violent paroxysmal pain, which seemed to dart from the middle ear into the left side of the nose. There was considerable tumefaction of the mucous membrane covering the middle and inferior turbinated bones of that side, with hyperæsthesia and some redness. The parts were free from secretion, but she spoke of a discharge "like water" when the pain was at its worst. The auditory canal was normal and not sensitive; membrana tympani perfect. The teeth of the upper jaw were much decayed. There was a sensitive point over the infra-orbital foramen, and one on the side of the nose.

CASE III.—Mrs. P., æt. 50. No family history obtained. Her sister, however, has been in an asylum under treatment for insanity—attributed by the patient herself to "womb disease." Mrs. P. has been under my observation for the past three years, during which time she has exhibited a variety of symptoms fairly attributable to the menopause in a patient with a neuropathic tendency. She had the first attack of trifacial neuralgia two years ago, and has suffered two outbreaks since, always accompanied by the same manifestations: lachrymation, severe conjunctivitis, photophobia, dryness of the left nostril with inability to breathe through that side, and the occurrence of a profuse serous discharge with the subsidence of the attack. Examination during two attacks has shown a tumefied inferior turbinated bone. The use of the probe caused a distressing attack of sneezing. During the interval her nose is perfectly clear.

CASE IV.—Miss S. W., æt. 26. Paternal antecedents good. Her mother, three male members of whose family have died of apoplexy, suffered with migraine in early adult life, but has recently had, apparently in its stead, three severe attacks of neuralgia of the lumbar plexus. Miss W. developed trifacial neuralgia of a severe type at the age of twenty-one, after a period of much mental and physical strain. During her last attack, I noticed a small, circular, hyperæmic, and extremely sensitive elevation on the left anterior palatine fold, red and painful malar and mental points with grayness of the eyebrow and hair of that side. Articulation and deglutition were difficult, the patient declaring her muscles stiff, living on liquid food, and maintaining an almost absolute silence. This condition lasted three days.

CASE V.—Mrs. W. S., æt. 60, ignorant of her family history, was seen by me, in consultation, on September 26, 1882. She was stout and well preserved, with no indication of senile decay. For the previous six weeks she had had most excruciating paroxysms of pain, at intervals of five or ten minutes, throughout the entire day and night. Large doses of morphia had given her an occasional respite. She described the pain as beginning in the throat, darting into the ear, and down into the neck. Each paroxysm (and I witnessed a number) was accompanied by involuntary contractions of the facial muscles. Gastric irritability, due to the morphine, interfered greatly with my examination. I found the parts normal, with the exception of a bright red spot on the left anterior palatine fold, pressure upon which promptly caused an attack. I repeated the manipulation several times with the same result. Treatment, which will be discussed below, relieved her promptly, but a recurrence took place four months later of a much milder type.

The treatment of Cases I. and II. embraced an alkaline spray to satisfy the patients that the catarrh was being attended to, and the administration of gelsemium in small, but oft-repeated, doses until full physiological effects were produced, and then keeping them influenced for two or three days longer. Case III. was put on the same treatment, without the spray. Duquesnel's aconitia, in the dose of one two-hundredth grain, gradually increased until the well-known tingling and numbness were complained of, was employed in Cases IV. and V. with admirable results. The average time of treatment of the neuralgia proper was about ten days, a tonic treatment being instituted afterwards. The nutritive disturbances occurring in these cases were of the utmost interest. The frontal pain or fulness, hyperæmia or tumefaction, or both, and the secretory changes may be fairly attributed, I think, to the disturbed innervation—to the influence, perhaps, of the so-called "vaso-motor" and "trophic" systems.

1210 WALLACE STREET, PHILADELPHIA.

A CASE OF EXTENSIVE BURN, UNHEALED AFTER SIX YEARS, PERMANENTLY CURED BY MASSAGE AND SKIN GRAFTING.

BY FRANK C. WILSON, M.D.,

PROFESSOR OF PHYSIOLOGY IN THE HOSPITAL COLLEGE OF MEDICINE, LOUISVILLE, KY.

IN February, 1883, I was consulted by Miss L. P., of Va., as to the possibility of relieving an unhealed burn of about six years' duration, the history of which I give in her own words:

"I was burned on the night of the 11th of September, 1877, about 10 o'clock, by the explosion of a kerosene oil lamp. I had gone to my room; undressed; and was writing near a bureau on which

the lamp was placed. While writing I heard a spurt from the lamp and noticing a flare in the blaze, I immediately arose to my feet, and at that instant the explosion occurred, throwing the burning oil on my left arm and side and igniting my clothing. My father heard the explosion and my scream from his room, immediately beneath mine, and came to my assistance in a second or two. He attempted to tear my clothing from me, but, finding he could not do so, wrapped me tightly in a pair of woollen blankets, in order to smother the flames. This, of course, drew the burning clothing, saturated with hot oil, closely to my arm and side, though it at once extinguished the flame. He then carried me down stairs, and upon removing my clothing, it was found that I was very badly burned on the left arm from above the elbow to the ends of the fingers, and down the left side extending to the spine, and from the waist to a little below the hips. It was apparent from the first that the arm and hand were the most severely burned, the skin and flesh hanging from the arm in shreds, leaving the bone exposed in several places. The burns were then covered with lard and flour, and a sheet was wrapped around me. In this condition I remained for three hours before the arrival of the physicians, who administered chloroform to alleviate and deaden the intense suffering, removed the lard and flour, and applied linen cloths saturated with a mixture of linseed oil and turpentine. By the time the effects of the chloroform wore off I was greatly relieved by this application. This treatment was continued, and was the only one used for a long time. In a few days the sores commenced suppurating, and the flow was so excessive that daily renewal of the cloths, and redressing was necessary; to be able to endure this, I had to be chloroformed, and for one hundred and twenty consecutive days I was put under the influence of it to have the operation repeated. The only position I could occupy was on my back; thus lying on the sore on the back in a single bed in the centre of the room, the arm being placed on a pad and suspended by a cord from the ceiling. The arm was very red and swollen to three times its natural size, while the hand seemed to be one entire scab. It was three months before there was any evidence of the burns on the body healing, but the hand and arm still remained obstinate, without any signs of improvement. Some time in January, 1878, the treatment was changed, and vaseline was used as a salve. The sores on my body began to heal, and by the first of March I was able to be taken up and put in a rocking-chair. This was of great benefit to the burns on my back, relieving the pressure, and they healed so rapidly that by the first of July I could wear a dress, by leaving out the left sleeve.

"On the 4th of July, I went to Lynchburg, Va., to consult Dr. ——, who examined the hand and arm thoroughly and prescribed cauterizing with nitrate of silver. I returned home and attempted to follow his prescription, but it was so painful and seemed only to inflame and aggravate the sore, that I gave it up in a week or two. In December, 1878, I went back to Dr. ——, and placed myself under his care until I should be cured. I cannot remember the various remedies he used the first month; there were a number of powders, salves, etc., none of which suited the hand at all. At last he commenced using a lotion, the name of which I never knew, giving at the same time internally, Fowler's solution of arsenic. The hand and arm at once began to heal, and by the middle of May he discharged me, thinking the cure permanent. I came home, but it was only a short time before the hand began to burn and break out in small sores, and by the first of July it was almost as bad as ever. I immediately returned to Dr. ——, but nothing he did seemed to check the spreading of the sores, and in October of 1879 I came back home with the arm almost entirely healed, but the hand a perfect mass of sores. In this condition it remained for one year, when my general health became so bad from the constant drain on the system that on the 16th of October, 1880, I went to Richmond, Va., to consult a distinguished surgeon of that city, who, after an investigation of the case, seemed to think he could permanently relieve me. He had the hand poulticed until all the thick scab was removed, then applied absorbent cotton saturated with solution of hydrate of chloral, twenty grains to a pint of water, The hand healed rapidly under this treatment, and I began to strengthen, taking, as a tonic, tincture of iron with strychnia, etc.

"I left Richmond on the fifteenth of December, and once more flattered myself that my hand was cured, but as soon as the warm weather set in, it commenced breaking out as before. I consulted my Richmond physician by mail, and he prescribed a continuation of the chloral and tonic, but as these failed to have any effect, I went back to him in January, 1882, but he did not seem to think much else could be done for it, and, had I urged it, would have readily assented to its amputation as the best method of relief. I returned home and continued the treatment with the chloral and cotton until January, 1883, when I went to Louisville, Kentucky, for treatment."

When I took charge of the case a careful examination revealed the following condition. The arm and forearm from above the elbow to the wrist showed large cicatrices in many places adherent to the deeper structures and even to the bone. The elbow could not be straightened beyond an angle of one hundred and fifty degrees, due, in all probability, to ossific deposit in the olecranon fossa, which had no doubt been exposed by the burn. The hand, which was flexed at the wrist, was healed over the dorsal surface, the skin presenting a shiny, glistening, and unhealthy appearance. The finger nails were like rams' horns, mere masses of horny tissue, piled upon the ends of the fingers. Upon the palmar surface of the hand and several of the fingers were large suppurating sores, which had remained in the same condition for more than a year. At times they would heal a little, only to break out again. The little and third fingers were very much flexed by cicatricial contraction, and the width of the hand very much narrowed by the approximation of the thumb and little finger. The circulation in the fore-

arm and hand was exceedingly poor, the pulse at the wrist being scarcely perceptible. Her general health was bad, appetite poor, countenance pale and anæmic. She suffered greatly with a burning sensation in the hand.

I determined to pursue the following line of treatment: 1st, to improve the circulation and develop the muscles by thorough massage; 2d, after thoroughly cleansing the suppurating surfaces by a poultice, to insert numerous skin grafts; 3d, to divide the cicatricial contractions; and, 4th, by daily manipulation gradually to restore the use of the joints. Placing her in charge of a skilful manipulator, I had the satisfaction of finding a most marked change in two weeks, the pulse becoming strong and full, the skin taking on a much more natural appearance, and healthy nail tissue showing itself at the roots of the nails. I then applied a poultice for twenty-four hours, clearing off all the dried scabs, leaving a raw, granulating surface upon which I inserted eight or ten grafts taken from the skin of a young rabbit. Several of these adhered, forming little islets of skin. I next inserted a few grafts from the human skin: but chiefly relied upon grafts taken from the inner membrane of a perfectly fresh hen's egg. A number of these were inserted and many of them adhered, so that in a few weeks the entire raw surface was covered with sound cuticle, and the entire surface of the hand presented a much more healthy appearance. The horny masses upon the extremities of the finger were about half pushed off by the growth of the new and healthy nails. As the cicatrization proceeded, Madame Lager followed it up by her massage, even developing the interossei muscles.

With the return to the normal and healthy condition of the tissue, the sense of constant burning which had before been so annoying and depressing, entirely disappeared.

When the surface had completely healed, I divided the cicatricial contractions, strapping the fingers to a dorsal sole-leather splint, so as fully to extend them, until the raw surfaces left by the burns should heal. This was hastened by grafting as before, and in a few days the splint was removed. It was found necessary to divide a second time the contraction of the little finger, and in order to lessen the tendency to subsequent cicatricial contraction the cut was filled with a sponge graft. Although this healed over much more slowly than the others yet it answered the purpose well.

Systematic and regular manipulation of all the joints was then practised and the electrical stimulation of the muscles added, so that gradually the use of the hand was recovered. She passed through the hottest part of the summer without any tendency to break out as it had done every year previously, and she was sent home about the middle of August with instructions to continue the regular manipulation of the joints with the daily use of the battery, with which she was provided. October 15th, she writes that the hand continues to strengthen daily and that she can do anything she wishes with it.

The first point to be noticed in this case is the marked benefit to be ascribed to the massage treatment, which, by stimulating the circulation of the limb, so improved the nutrition of the part that much more healthy tissue was formed, as shown by the growth of natural nails and the disappearance of the shiny, glistening look of the skin.

To the poor circulation no doubt was due the constantly recurring ulceration of the surface.

2d. The use of the three forms of skin grafts gave the opportunity of testing their relative merits. Of the three, I much prefer the egg membrane, as being more readily obtained, and one egg, which must be warm and fresh, will supply any number of grafts needed. A large proportion of those inserted adhered, forming islets, which by their coalescence covered over the entire surface.

3d. The recovery of the use of the muscles and joints was greatly promoted and hastened by the daily manipulation and the use of the faradic battery.

Louisville, Kentucky, October, 1883.

ON A METHOD OF ABDOMINAL TRACTION, AND ITS APPLICATIONS.

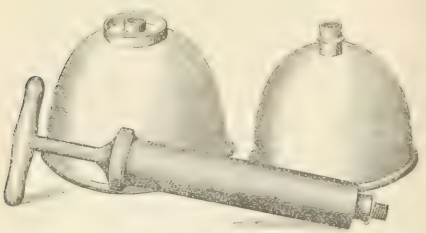
By HENRY HARTSHORNE, M.D.,
of Philadelphia.

Some time since, I exhibited before the College of Physicians of Philadelphia a simple apparatus for abdominal traction; having especially in view its use as an aid in producing artificial respiration. My attention had been called to the incompleteness of the means commonly employed for that purpose, by their failure in two cases of drowning which I was so unfortunate as to witness at Atlantic City, N. J. Easy experimentation on my own person satisfied me, as it may anyone, that Sylvester's method (the best in use) has very little *compulsory* power in expanding the lungs. One may, without the slightest difficulty, effect *expiration* while the arms are raised backward and far over the head, and *inspiration* while they are being brought down and pressed laterally against the ribs.

Considering the large amount of force readily exercised by the diaphragm in what is called "abdominal" as distinguished from "thoracic" respiration, it is reasonable to suppose that, in asphyxia from any cause, respiration may be prompted and assisted in renewal by *drawing the viscera away from below the diaphragm.* Such is the intention of the apparatus which I now propose to describe. It consists, first, of a tube or pump, not unlike, in shape and size, to an ordinary enema syringe of the old-fashioned kind; holding, however, somewhat less than a pint, for lightness; and having a cross-piece at the handle, for greater firmness in traction. It is constructed as a *two-valve* exhausting pump; so that, by drawing upon it again and again, a firm hold may be taken and kept.

Secondly, the tube is adjusted to a large cup or metallic bowl; designed to be applied to the abdomen. I have had two sizes of bowl made, so as to suit bodies of greater and less width and stature. One bowl is seven and a half inches across its outer rim, and five inches deep; the other is six inches across, and three and a half inches in depth. Either may be affixed to the exhausting pump for abdominal

traction. My first thought was to use a *one-valve* pump, so as to *alternate* rapidly the elevation and depression of the abdominal walls; but it was soon found that, unless with a pump so large as to be



Scale one-fifth inch = 1 inch.
Abdominal Tractor.

unmanageable on account of its weight, the lifting of the viscera by one draught of the pump will not be sufficient to answer a good purpose. By trial on a living body, I find that the exhausting pump and bowl above mentioned will take a very strong hold of the abdomen, and exert a great lifting action upon its contents.

No case of drowning or other asphyxia having come under my observation since the instrument was constructed, I have had so far to content myself with its trial upon the living body, with normal respiration, and some applications of it to dead subjects. The latter, however, on account of the bodies having been semi-solidified by preservative injections, were not satisfactory in determining what such traction may do towards effecting artificial abdominal respiration. This yet awaits an opportunity of fair trial. The least that may, in my judgment, be expected of it is, that it may render valuable aid to the Sylvester method; just as *counter-extension* does to *extension* in the reduction and treatment of fractures. The two methods may be combined with perfect facility and convenience.

More positive ground of confidence appears to me to exist, in regard to the application of a similar mode of abdominal traction to the treatment of *strangulated hernia* and some forms of *intestinal obstruction*. This is not a new proposition. Authors mention it as having been put in practice by Anton Nuck, the eminent anatomist and surgeon, professor in the University of Leyden, near the end of the seventeenth century. It is said to have been a method sometimes in use by Russian practitioners; and allusion to it was made in an English medical journal within a year or two, the reference to which has recently escaped my search.

Slight reflection will show that the reduction of a femoral or inguinal (of course not an umbilical) hernia must be promoted by forcibly abstracting the mass of the contents of the abdomen in a direction opposite to that of the protrusion. This is the *rationale* of the common expedient of raising the patient's heels high above his head, which I have known to be quite effectual in practice.

Also, it is evident that if, in a case of *intussusception*, we could seize either the received or the receiving portion of the gut, and draw upon it, we should almost certainly relieve the invagination. While this is not *sure* to be done in every case by abdominal traction, it affords a greater *probability* of such a result than any other mode of treatment without laparotomy, and hence it is worthy of careful trial.

My apparatus was made by A. H. Wirz, of Cherry Street, Philadelphia, and will be at the service of any practitioner who may desire to use it in fitting cases.

GERMANTOWN, PHILADELPHIA.

HOSPITAL NOTES.

NEW YORK EYE AND EAR INFIRMARY—SCHOOL OF OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY.

(Aural Service of DR. SAMUEL SEXTON.)

Reported by ROBERT BARCLAY, M.D., Assistant Surgeon.

FOREIGN BODIES IN THE EXTERNAL AUDITORY CANAL.

THE frequency with which troublesome cases of foreign body in the external auditory canal are met with, and the great importance of keeping in mind the anatomical relations of the parts to these intruders lest harm should result to the organ of hearing during efforts at removal, makes the subject one of particular interest to the general practitioner as well as to the specialist. Thanks to the large attendance at the aural clinic of the Infirmary, examples of this kind are numerous enough to give a very fair idea of the subject. In presenting this matter, some of the following cases were shown to the students, and Dr. Sexton offered such practical remarks as the different cases suggested.

Foreign bodies are not often met with in the ears of very young infants, unless put in by playmates—a difficult feat on account of the collapsed state of the canal in these subjects. Older children, however, frequently introduce them themselves. The entrance (meatus) to the canal is often, especially in children, naturally contracted by the elastic fold of its posterior border which comprises that portion of the cartilage forming the bottom of the concha and the beginning of the canal. When foreign bodies are slipped beyond this constriction, they are indefinitely retained, since they cannot fall out again of themselves, nor can they be removed by jarring the patient's head. In syringing for their removal, escape at this point is difficult, and should, therefore, be facilitated by drawing back the auricle, and completing the extraction by means of the hook or forceps. Illumination by means of the head-mirror is a *sine qua non*.

Piece of chalk in ear of child aged three years, remaining two days, no morbid symptoms; removed with forceps.

L. S., aged three years, came to the Infirmary August 7, 1882.

On the afternoon of August 5, the patient pushed a

small square piece of chalk into the right external auditory canal. The mother of the patient subsequently attempted its removal, and, after failing, brought the child to the Infirmary. Examination showed a white body in the right external auditory canal.

Dr. Sexton, with the aural foreign-body forceps, easily removed this white body, which proved to be a piece of chalk. No morbid symptoms were reported, and there were no physical signs to indicate any injury to the ear.

Half bean in ear of boy aged five years and seven months; ineffectual attempts at removal; under anæsthesia, bean removed in fragments; painful mastication.

G. F. F., aged five years and seven months, came to the Infirmary, August 26, 1882. On August 25, the patient, while at play, put half a Lima bean into his left external auditory canal, and, in attempting to remove it with his finger, pushed it farther inward. Shortly afterwards, he attempted to remove it with a pin, and pushed it still further from the meatus. The patient then went to the family physician, who tried in vain to remove it with instruments. He subsequently made another unsuccessful attempt the same day. He then gave the mother a liquid which he ordered her to drop into the patient's ear as fast as it evaporated, telling her to return with the patient the following day. Instead of doing so, she came to the Infirmary, August 26. There had been no discharge from the ear. It was found unadvisable to attempt removal of the foreign body on account of the exceedingly restless condition of the patient.

On August 28, after the patient had been anæsthetized by the house-surgeon, Dr. Sexton removed the three fragments of bean, the bean having previously been broken. These pieces of bean were quite soft.

On August 31, the canal was tender and red, and the patient irritable. Mastication was painful. The fact that the lower molars on both sides were carious was significant.

The patient improved under treatment, and was subsequently discharged.

Round button in ear of girl aged five years, remaining two months; ineffectual attempts at removal; removal accomplished under anæsthesia.

B. S., aged five years, came to the Infirmary January 8, 1883. Two months ago the patient put a round china button into her left external auditory canal, where it has remained ever since. Attempts were made at one time by the family physician to remove the foreign body, but proved unsuccessful, and caused great pain. Examination showed a foreign body in the left external auditory canal.

The patient having been anæsthetized by the house-surgeon, the foreign body was removed by foreign-body forceps, and proved to be a round china button. No harm was done by the operation.

Cotton-wool wad in ear of man aged sixty-six years, with cerumen; removal with syringe; deafness relieved.

J. G., a carpenter, born in Germany, aged sixty-six years, came to the Infirmary June 4, 1883. The patient has been deaf in the left ear for the past six months, and says he knows no cause for it. He has experienced no pain, and the ear has not discharged. At the time he first noticed this deafness, he swabbed the ear once with water on a swab of cotton, and, as he says, does not remember having left any of the cotton in the canal after drying it. The deafness subsequently increased in the left ear. The right ear gives no abnormal subjective symptoms.

Examination showed a moderate amount of cerumen in both canals, which are large. Syringing brought away the cerumen, and from the left canal a small wad of cotton also. Relief was complete.

Bug in ear of woman aged twenty-one years; remaining one-half day, with intermittent tinnitus; removed with syringe.

M. C., aged twenty-one years, came to the Infirmary June 11, 1883. This morning, on awakening, the patient says she "felt the legs or wings of something moving around in her right ear." This sensation alternately ceased and recurred. She has had at no time any subjective tinnitus aurium, nor impairment of hearing.

Examination shows a small black body at first on the posterior inferior quadrant of the membrana tympani, but later on the anterior inferior, as it has changed its position. Syringing brought away the dark body, which proved to be a small bug.

The alternate disappearance and recurrence of tinnitus aurium, corresponding to the rest or movement of the insect, are significant; and the patient could hear perfectly well even when the insect was at rest or moving upon the membrana tympani.

Flies in ear of patient aged seven years, with otorrhœa following scarlet fever; removal with syringe.

H. V., aged seven years, came to the Infirmary July 23, 1883. Four years ago the patient had scarlet fever, lasting for about five weeks, which was followed, for one or two weeks, by a discharge from both ears. At the end of that time, it ceased in the left ear, but has continued in the right to the present time. The discharge is very offensive. Some slight impairment of hearing was found in the right ear. Examination showed the right external auditory canal filled with pus. On syringing, three flies were removed with the pus. A polypus was now visible at the inner end of the canal.

From this time, the patient improved; the polypus was removed; and under the treatment subsequently maintained, the patient finally recovered.

Cases of insects in the ear with otorrhœa are seen very frequently at the infirmary. The one cited above is a fair type of this class of cases.

Two cherry-pits in ear of girl aged four years; one removed by mother with hairpin; the other removed at Infirmary with syringe and forceps.

L. S., aged four years, came to the Infirmary August 13, 1883. The patient's mother stated that she removed from her right ear, two weeks ago, a cherry-pit. While cleaning her right ear yesterday morning, August 12,

the mother inflicted pain, of which the patient complained; this pain has continued ever since then.

Examination showed another cherry-pit deep within the right external auditory canal, with congestion of canal walls. The left ear was normal. Syringing brought the cherry-pit to the vicinity of the meatus, and Dr. Sexton's assistant, Dr. Adolph Rupp, removed it with the foreign-body forceps.

Discoid pencil-tip in ear of boy aged eight and one-half years, remaining six days; great pain; repeated ineffectual attempts at removal by several physicians; wound of drum-head; removal under anæsthesia with improvised hook and forceps.

N. C. M., aged eight and one-half years, residing in Saugerties, N. Y., came to the Infirmary October 25, 1883. On October 19, the patient put a foreign body into his right external auditory canal. His father could himself discern the foreign body lying there, and after vainly attempting to extract it, took him the same day to the family physician. Attempts were made by him to remove it with an earspoon. The attempts were unsuccessful, and caused immediate and subsequent pain. On the next morning, October 20, the attempts at removal were repeated, an earspoon and forceps being employed. The attempts were futile, and caused the patient great pain, which now continued, with intervals of relief. Glycerine was ordered to be put into the canal whenever the patient complained. This order was obeyed, and glycerine was applied thrice during the day and once during the night. On the following morning, October 21, the patient was taken to Albany, N. Y., where a well-known surgeon was consulted, and given control of his case. He first syringed the ear very persistently, but in vain, and then attempted removal with an earspoon and forceps. The attempts were attended with pain, hemorrhage, and failure. The seance lasted one hour and a half, and no anæsthetic was employed. After these unsuccessful attempts, this physician advised the patient's father to permit no one to use instrumental aid, or attempt removal, but to drop sweet oil and chloroform into the canal, and that the foreign body might escape without further interference. Another physician in Albany saw the patient on October 22, and made unsuccessful attempts to remove the foreign body, using syringe and forceps, causing pain, which subsequently became constant.

The patient was then brought to New York, and came to the Infirmary on October 25 seeking relief. Examination showed that he had had nasal catarrh for several years, and that he was a mouth-breather. Both of the superior six-year molar teeth were carious. The left membrana tympani was dull and humid in appearance; the canal of this side contained some dried cerumen.

The right external auditory canal, on being examined, showed a foreign body embraced rather tightly in the swollen tissues, and smeared with blood, epithelium, etc., from previous efforts at removal. Its size and shape could not be determined, although, from the touch of the probe, it seemed to be very hard. It lay well down in the cul-de-sac beyond the isthmus of the osseous portion of the canal. The gentleman who first saw this case at the Infirmary made an attempt at removal by syringing, without avail, however. Dr. Sexton had the patient anæsthetized, and, after cleansing the parts by light syringing and subsequent drying with cotton-wool, proceeded to employ his own foreign-body forceps for the removal of the intruder. It was found, however, that, after seizure by the forceps, although very considerable force could be exerted, so large was the bite of the instrument (the part seized being, as it afterwards appeared, the circumference of the foreign body) that its grip was not sufficient to insure success. A hook was then improvised by bending a silver probe near one extremity, and this was passed sidewise between the object and the superior wall of the canal, then turned, so that its hook engaged against the inner surface of the substance to be removed, when very considerable traction was made, with the result of bringing what appeared to be the broken-off ivory tip of a lead pencil into the cartilaginous portion of the canal, whence its removal was completed by forceps.

It is worthy of remark that it was stated to the operating surgeon that the foreign body was an ovoid or spheroidal pebble, which was misleading to the extent that the forceps were unnecessarily abandoned, since, had it been known that the object was a flat section of a bone or ivory pencil-tip, a little manipulation would have soon discovered the flat-sided surfaces, which could have been easily held in the grasp of the forceps. It was determined, when operating, to bring the foreign body away even at the risk of considerable laceration of the wall of the external auditory canal, which is well known to heal very readily.

Slight hemorrhage followed the operation from the laceration of the canal; but, unfortunately, it was found that the numerous attempts previously made had resulted in wounding the middle ear, and it was deemed unwise to send the patient home until he had recovered from the results of this injury. A letter from his parents, written in November, reports no further trouble since their return home.

Stone in ear of boy aged seven years, remaining six months: ineffectual attempts at removal; removal with syringe and curette.

O. S., born in Germany, aged seven years, came to the Infirmary December 3, 1883. Last summer a playmate put a small stone into the patient's right external auditory canal. It caused some pain at the time; and whenever he tried to lie with his right ear upon the pillow, the pain became intolerable. On November 30, his mother, in trying to clean his right ear with a hairpin, felt it scratch the stone. At the same time, this caused the patient such pain that he cried out. His mother, after attempting in vain this morning, December 3, to remove the stone with a hairpin, and having hurt the patient a great deal, brought him at once to the Infirmary for relief.

The patient states that, except when the stone is interfered with, he experiences no distress. He hears with his right ear a low voice at a distance of fifteen feet.

Examination showed the external auditory canals to be rather large, affording an unusually distinct view of the passage. The right one contains a little cerumen, but the stone can be plainly seen just beyond the lumen. The patient seems to be of a courageous nature, enduring manipulations very well, and Dr.

Sexton decided to operate without placing him under an anæsthetic.

At first, the hooked curette, as made by Mr. Ford,[1] was employed, but a slight movement of the child's head caused the pebble, which lay loosely in the passage, to be carried further inward; the foreign-body forceps were then employed, with a similar result, the object being pushed a little further inward with each attempt. The stone now lay on the verge of the isthmus, and further attempts would have resulted in carrying it over into the cul-de-sac, from which place its removal would have been far more difficult. The auricle was now drawn well backward and outward, and a strong but small stream of warm water was thrown from the syringe underneath the stone; the return stream carried it somewhat outward, and a second stream brought it out until it met the slightly constricted lumen, whence it was completely dislodged with the curette. It proved to be a stone, light colored, very smooth, somewhat ovoid, but flattened. The wall of the canal was found slightly abraded at the isthmus. The membrana tympani was intact and healthy, though slightly reddened from the effects of the syringing.

On December 10, examination showed a little cerumen in the canal, which is rather greater in quantity than ordinary. The points of abrasion are healed. There is no irritation remaining in the canal. The membrana tympani is intact and normal.

Remarks.—Some practical suggestions were made by Dr. Sexton to the class in regard to the removal of foreign bodies. There should never be undue haste or precipitation in the efforts at removal: the disadvantages of a neglect in respect to this were shown in some of the cases brought to notice. In young and restless children, it was quite often necessary to administer an anæsthetic before beginning operative procedures. The operator should first carefully ascertain the exact location of the object and its size and character; and as to this matter, the statements of the patient or friends should not be implicitly relied on, as they were frequently misleading; sometimes the foreign body was found to be quite different from what it had been stoutly asserted to be.

Regarding the choice of instruments to be employed, Dr. Sexton advised that when the patient was old enough to keep quiet, and the object was found just within the lumen, the hooked curette before alluded to was usually alone sufficient; but even in such a case as this, if the foreign body had been started further in on being touched it was well to direct a smart stream of warmed water into the canal, well to one side of the stranger, if possible, and this should be quickly followed up until successful, not forgetting that the child must usually be firmly held by a competent assistant during the operation. Should the foreign body, however, be found well down in the cul-de-sac and impacted, as is too often the case, from previous unsuccessful efforts, syringing may be unavailing; then the foreign-body forceps will often be useful—indeed they are of the greatest value when the object is impacted anywhere in the canal, since, when held in their bite, very great traction can be made. When the hard, or smooth and hard, nature of the object prevents a secure hold being thus obtained, the hooked curette is the more serviceable instrument, for it can be, in nearly all cases, forced between the object and the walls of the canal, when, from its firm hold—the teeth being set so that, on withdrawal, they become fastened or firmly impinge against the object—effective traction can be made. Of course, when a firmly impacted body has once been started, efforts should not be relinquished until successful, even though the canal be considerably lacerated, for such wounds are generally found to heal very promptly. When the foreign body lies in contact with the drumhead, it requires great tact and dexterity to avoid injury of that delicate structure, but in the great majority of instances the operation may nevertheless be safely performed. In these difficult cases of deep impaction, it is often found that the foreign-body forceps will grasp hard and smooth objects more successfully than would be supposed, and patient effort in this direction should not be too quickly relinquished. The surgeon must *under no circumstances try to fix the forceps without distinctly seeing what he is about.* If the parts are moistened with blood, mucus, etc., this should be carefully wiped away before proceeding. Sometimes the bleeding may be checked by light syringing with *hot* water before wiping the parts. Should the operator carelessly poke these forceps about in the neighborhood of the drumhead in efforts at seizure, he may easily lacerate that membrane.

[1] Of Caswell, Hazard & Co., New York.

MEDICAL PROGRESS.

Administration of Medicines through the Air-passages.—On November 13, 1883, Dr. Sandras read a paper before the Académie de Médicine on "Antimicrobial Medicamentous Inspirations or Inhalations." His very interesting experiments have led Sandras to hope that medicamentous substances introduced into the respiratory apparatus act either directly and locally by immediate contact with the injured portions of the organs, or indirectly on the nervous system and on the whole organism, after having gotten into the circulation through the lungs.

In concluding his paper, Sandras suggests that this is a new way opened for the introduction into the organism of medicines which the stomach cannot retain in certain cases. This method has already given very happy results, both in diseases of the respiratory and of other organs. The medicines are administered by spray from an inhaler.—*L'Abeille Méd.*, January 14, 1884.

A Baby without Arms or Legs.—The *Enciclopedia Medico-farmaceutica* states that this teratological case is now interesting the profession in Madrid. It is that of a little girl, five months old, which was born without arms or legs. The thoracic and abdominal cavities are perfectly formed. When born, it seemed doubtful whether it could survive, but at present it is in a very healthy condition. Its first teeth have just appeared, and it weeps and laughs just as other children.—*Progrès Méd.*, February 2, 1884.

Preventive Inoculation with Attenuated Charbon-cultures.—At the meeting of the Académie des Sciences, on December 3, 1883, M. Chauveau presented

a note on preventive inoculation with charbon-cultures attenuated by the method of rapid heating. M. Chauveau's studies on this subject, with the assistance of M. Wosnessenski, especially as regards the respective *rôle* of heat and oxygen in the attenuation of virulent cultures, have demonstrated the enormous preponderance of the first of these agents and the possibility of producing, by the exclusive use of rapid heating, attenuated cultures practically utilizable for preventive inoculation.

Between May, 1882, and September, 1883, M. Chauveau has inoculated a large number of sheep with his special culture liquids, the spores of which were attenuated by heat at 176° F. None of them have died, and he has assured himself in every case, by a third culture, that the harmless spores preserved their activity. But it is still more interesting to know whether these sheep really acquired an immunity, whether the inoculation had exercised a preventive influence upon them. Of this there is no doubt, for revaccination with very strong virus had no effect.

It is certain that all the subjects have not the same resistance; the greater part of those in which the first inoculation produced only slight effects were highly susceptible to the second inoculation with strong virus: those, however, which were made sick by the first vaccination were not susceptible. Chauveau now uses Pasteur's method of double inoculation, which is as follows: Instead of heating *en masse* all the *vaccinat* (the liquid for inoculating) contained in each receptacle, he makes two equal parts, one of which is heated to 176° F., and the other kept as it is. The latter is called the second vaccine. The first—that heated—was tried on ten sheep; none of them died. The second experiment was unavoidably delayed, but only one died. Three weeks afterwards the remaining nine were inoculated with very virulent blood, but with no bad effect. They had, therefore, acquired perfect immunity.—*Gaz. Hebdom.*, December 14, 1883.

PILOCARPINE.—M. HUBERT LAVRAND has recently made quite an extended study of the physiological and therapeutic action of pilocarpine.

Pilocarpine may be given in the form of the nitrate or hydrochlorate, by hypodermatic injection, in doses of gr. ⅛ to ¼. Its double diaphoretic and sialagogue effect is the indication for its use. In affections commencing with a chill, in asthma and the dyspnœic attacks in emphysema, it is highly useful. Though it acts less rapidly than morphia as a sedative, the effect is more lasting. It may be employed as a useful adjuvant in the treatment of diphtheria.

Pilocarpine will sometimes arrest an acute pleurisy in the beginning, and very often has a favorable influence upon it. In ocular therapeutics it may take the place of eserine as a myotic, and may be employed by instillation. In acute nephritis, under the influence of pilocarpine the symptoms rapidly improve, and in many cases the affection is promptly cured. Pilocarpine has a beneficial action on uræmic accidents, whether puerperal or scarlatinal. Chronic parenchymatous nephritis is benefited by pilocarpine in all its stages, especially when there is uræmia; but the more recent the lesion, the more efficacious is the drug. It is also efficacious in chronic interstitial nephritis.

The only contraindication to the use of pilocarpine is an advanced cardiac lesion; it causes arythmia and a diminution of the arterial tension. It has been used successfully in a large number of cases of obstinate hiccough, in persistent neuralgic pains, and in alopecia; it is a powerful antidote against belladonna and atropia poisoning, and may be given, in these cases, in larger doses.

Rabuteau has lately shown that pilocarpine and ergotine are antagonistic, the first acting as a vaso-dilator poison, the second as an excitant of smooth muscular fibres.—*Progrès Méd.*, December 29, 1883.

SALICYLATE OF BISMUTH IN TYPHOID FEVER.—PROF. VULPIAN has recently shown the value of Desplat's study of the antipyretic action of the salicylate of bismuth in typhoid fever. In the hands of Prof. Desplats, this remedy has given very satisfactory results (see an abstract of his paper in THE MEDICAL NEWS, August 4, 1883, p. 124). In doses of ℈iv to ℥ijss, administered several times a day during the course of the disease, it seems to have a decided abortive action; and after the disease has fairly set in, it lightens the symptoms and moderates the gravity of the affection.

It is difficult to determine its precise mode of action. Does it act on the ferments contained in the blood and certain viscera? Or does it act on the spinal centres and moderate the temperature? These points are not definitely determined, but its antiseptic action in organized ferments is very powerful, as shown by experiments in the laboratory, which permit us to think that it acts on the materials contained in the intestines of typhoid fever patients; for its insolubility permits it to reach the lowest portion of the intestinal tract without being absorbed. Its action corroborates the ideas of Klebs and Eberth as to the two distinct stages in the evolution of typhoid fever; the first characterized by an intestinal lesion purely local, and due to the development of microorganisms; and a second, of general auto-infection, with localization in the different organs.—*Progrès Méd.*, December 29, 1883.

MALFORMATIONS OF THE HEART IN THEIR RELATIONS TO THE PATHOLOGY OF CYANOSIS.—At the close of a paper on this subject, DR. DAVID NEWMAN, of Glasgow, draws the following conclusions: It appears that the most important cause of cyanosis is obstruction to the flow of blood to or from the right side of the heart, and that the degree of the discoloration depends upon—

1. The time at which the obstruction became sufficient to give rise to cyanosis. The earlier the symptoms appear the more marked are they likely to be.

2. Free communication of venous and arterial blood in so far as it determines the resistance to the flow of blood to or from the right chambers of the heart, and the amount of blood carried to the lungs.

3. The amount of compensation established by a patent foramen ovale, or ductus arteriosus, or by a collateral pulmonic circulation.

4. The nature of the vessels and integuments—the thinner the vessels and other textures the deeper the hue.

5. The degree of hypertrophy of the right ventricle and the condition of the tricuspid valves.—*Glasgow Medical Journal*, February, 1884.

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THE TREATMENT OF DIPHTHERIA.

THE wide-spread prevalence of diphtheria, the necessary interest in the methods of treatment, and the remarkable contrariety of opinion on the subject of the remedies, are adequate reasons for the formal expression of our views. Obviously, it is our duty to occupy, as well as we may, a judicial position, to weigh the various methods in just proportion, and pronounce a judgment free from any personal bias. Methods of treatment—in the present state of the subject—must be judged from the clinical stand-point. Whilst pathological theories may direct therapeutical efforts, they cannot decide the relative merits of the various plans of treatment. Is there a specific germ? Is the malady first local, or do the local manifestations indicate systemic infection? Such questions must influence the application of remedies; but they cannot decide their value. From either point of view, the treatment of diphtheria must be local and systemic.

The remedies applied to the throat are directed to two ends; to destroy the germs of the disease; to check the spread of the exudation. Both purposes are usually effected at the same time; but not invariably, since some approved remedies have no action on bacteria, especially none on the process of pullulation.

As solvents of the false membrane, we have choice of several. We have the high authority of Mackenzie for regarding lactic acid as the most efficient. As there is no official dilute acid, the pure acid, weakened by the addition of water to the necessary point—about one in three—for dissolving the membrane, is painted over the affected area with a large camel's-hair brush, or is sprayed on. Next to this is lime-water, which may be applied by means of a large mop, or in spray, or, as has been effectively employed, by having the patient breathe the vapor arising from slaking lime. Papaïne, the digestive principle of the *Carica papaya*, has lately been used with striking results as a solvent of diphtheritic false membrane. It appears to be the best of this group of remedial agents, and, as it can have no injurious effect, may be used very freely. Solution of pepsine has also been effectively employed for this purpose.

Many other remedies are used to detach the false membrane. Steam assiduously applied is preferred to all other means by some skilful practitioners. Other agents are solutions of chlorate of potassium, tincture of ferric chloride, and these in combination. Unless the removal by solution, or the mechanical detachment of the membrane, is the preparation for subsequent applications, no practical benefit accrues, except in the case of laryngeal diphtheritis. The membrane removed, the surface beneath is then properly prepared for the action of parasiticides. Many of these are now in use. Sublimed sulphur has appeared to be very beneficial in some cases. Unless some sulphurous acid is formed, the nature of the service rendered by it is by no means clear. The application of sulphur, as, indeed, of all agents in the form of powder, is most conveniently and effectively done by means of an insufflator, which distributes the material uniformly over the surface.

There are several parasiticides of the phenol group which may be very advantageously employed topically. These are carbolic and salicylic acids, resorcin, phenoresorcin, chinolin, and some others. After the detachment of the false membrane, these are applied in solution or in powder to the affected area. A five per cent. solution of carbolic acid can be carefully painted over, or one per cent. solution sprayed on; the former method, when feasible, is to be preferred. Salicylic acid, finely pulverized, and sufficiently diluted, is more effectively used by insufflation, as it adheres more tenaciously, and the action is both more powerful and better sustained. Solutions of the acid, made by aid of biborate of sodium, can also be employed—dashed on by a suitable mop, or more carefully applied with the brush. Resorcin, properly diluted, well dusted on with the insufflator, is also an effective application. The relative utility of these remedies of the phenol group can only be settled by comparative trials.

Another important group of parasiticides, is that composed of iodine, bromine, and mercury com-

pounds. Iodoform has occupied lately a large place in professional confidence, as an antiseptic. In diphtheria it may be used in solution in ether, or, better, in the solid form, finely triturated with some suitable vehicle. The best combination is iodoform and tannin—the latter uniting with the mucus, forming a tough mass which holds the former in contact with the diseased surface. Iodotannin, a compound of iodine and tannic acid, which may be prepared extemporaneously by dissolving tannin in tincture of iodine, is little less effective than iodoform. Dissolved to the proper consistence, the solution can be painted on the affected part, as other fluid applications are made.

Bromine dissolved in water by the aid of potassium bromide, or an alcoholic solution, can be used as are the other members of this group, but it has no special advantages, and is, in respect to several qualities, objectionable.

Mercury is, unquestionably, growing in professional favor as a remedy for diphtheria. Calomel is an efficient topical application, used by the insufflator. When employed in this way, it should be prepared by trituration with sugar of milk, and then thoroughly dusted over the diseased part. Corrosive sublimate is the most destructive parasiticide, but its use requires circumspection. The solution in alcohol—one grain to one ounce of diluted alcohol—is a suitable proportion, but even this must be applied with care, painted or sprayed over the affected parts.

Quinine has, also, been used locally, with apparent advantage. The saturated solution of the hydrochlorate is a good preparation for this purpose. It is best used in the form of spray, which should be frequently and very persistently employed, or by means of a large, soft mop, a quantity of the solution can be dashed on where needed. A solution of quinine made by the aid of hydrobromic acid, may be more desirable, because stronger; but it cannot be used with the same freedom.

Chloral is one of the more useful of the local applications. It has an antiseptic action, is somewhat solvent of false membrane, and, probably, checks its formation. A solution in the proportion of ten grains to the ounce of water, may be applied, as the other solutions above referred to, in the form of spray, or by the brush or mop.

When the diphtheritic process invades the nares, it becomes exceedingly necessary to clear the passage and make efficient antiseptic applications to the diseased membrane. It is even more important in this case than in faucial diphtheria, for the reason that systemic infection is more apt to occur. With a suitable syringe, a solution of lactic acid, or lime-water, or the digestive papaïne, can be used to effect this important purpose. The passage-way opened, carbolic acid, resorcin, salicylic acid, iodized solutions, can be effectively applied. We need hardly assert that both time and patience are required to effect this important object, and unless effected a favorable termination cannot be reasonably hoped for.

The wealth of material at our disposal for the topical treatment of diphtheria is quite equalled by the remedies available for the systemic management. As very considerable depression of the vital powers occurs in every form of diphtheria, properly regulated support is necessary from the beginning. In this disease, as, indeed, in all corresponding maladies, the digestive fluids are wanting in the constituents essential to the process of digestion—pepsin and acid—and, hence, these should be artificially supplied with the foods. Peptonized preparations, *i. e.*, articles of diet partly digested by the addition of pancreatic fluid and an alkali, serve an excellent purpose.

To ply the patient with food which the organs of digestion cannot dispose of, is a not uncommon mistake, responsible, we doubt not, for the vital failure in some cases. Milk, beef-juice, and egg-nog are the most important articles, and with or immediately after them should be uniformly given pepsin and hydrochloric acid, or they should be properly peptonized. As a means of support, and as an important remedy, spirit (whiskey or brandy) plays the chief part in the therapeutical scheme of some practitioners, and by all it is utilized to some extent. That alcohol is, in a limited degree, a food, is now generally conceded; that it is an antiseptic of considerable power, is also recognized on all sides, and that it may be a cardiac stimulant or an antipyretic, according to the quantity administered, is a fact, but one not accepted unreservedly. The function of alcohol in diphtheria will, therefore, be determined by the mode of administration. Rarely, indeed, will the large doses, for an antipyretic effect, be required. Usually, moderate doses, frequently repeated will be administered to procure the effects of an antiseptic and a nutrient. As alcohol precipitates pepsin and destroys its ferment property when present in large quantity, and concentrated, if given to subserve the purpose of a food, it should be administered in small doses, and be freely diluted; if given to act as an antiseptic, it should be administered in large doses, and between the food when the stomach is empty. Any indefinite, especially any hap-hazard prescription of alcoholic stimulant is to be deprecated. The utility of alcohol in diphtheria, rightly given, is certainly great, but on the care with which the administration is conducted depends the degree of usefulness attained.

In our next issue we will consider the systemic treatment.

RESECTION OF THE RIBS FOR CHRONIC EMPYEMA.

In the *Union Médicale*, of January 1 and 29, 1884, may be found a paper by M. Berger, and a discussion at the Société de Chirurgie, on the removal of portions of one or more of the ribs for chronic pyothorax, complicated by a rebellious fistule, with the double object of affording a free outlet for the pent-up fluid and permitting approximation of the walls of the cavity. Of 27 cases, in which the result was known, 10 were completely cured, 8 were greatly relieved, 3 failed, and 6 died, but the deaths, except in one case, could not be attributed to the procedure itself.

The operation is usually described as that of Estlander, who first practised it in 1876, and Berger claims for him the merit of having originated it. Such a statement is, however, utterly unwarranted, as Roser had done the operation in 1865, and Simon repeated it in 1869, and, therefore, preceded Estlander in Europe. The measure in reality originated in this country, on December 8, 1857, with Dr. A. G. Walter, of Pittsburgh, who published a full account of his case in the *British Medical Journal*, of January 21, 1860, from which it appears that portions of the seventh, eighth, and ninth ribs were removed with bone-pliers. Five years later, Dr. Warren Stone, of New Orleans, accomplished the desired objects by excising a disk of the rib with the trephine. It will thus appear that Walter antedated Roser by eight years, and Estlander by nineteen years, and that he is entitled to the credit of having conceived and practised an operation to which the name of another surgeon is commonly attached.

HÆMOGLOBINÆMIA AND HÆMOGLOBINURIA.

Some interesting experiments have recently been made in Germany by Litten and others, consisting in the intravenous injection of substances supposed to have a disorganizing effect upon the red blood-corpuscles, and producing hæmoglobinæmia. Among these were aniline, common salt, and chlorate of potassium.

Litten found, after the injection of aniline, nephritis and an increased quantity of blood-coloring matter in the urine, to which he ascribed the nephritis, and concluded that all substances which dissolve blood-corpuscles act in this manner. Liebreich, on the other hand, ascribed the nephritis to the toxic action of the aniline itself, and not to the hæmoglobin resulting from the disintegration of red corpuscles.

The possibility of the former view is sustained by the results of some experiments by Lassar, who injected the defibrinated blood of an animal into the peritoneal cavity of another of the same species. In the case of rabbits in a few days, and in that of dogs during the second week, a urine of normal hue and without albumen suddenly became highly charged with hæmoglobin, followed by an albuminuria which continued for several months. These conditions were found to be associated with interstitial and sometimes parenchymatous nephritis. The observations of Ponfick and Lebedeff tend to the same conclusion.

The exact import of these results is as yet undetermined, but they have a bearing upon two important pathological conditions. One is that of hæmoglobinuria as we find it resulting from malarial poisoning, and the other is hæmatogenic or blood-icterus, as distinguished from hepatogenic jaundice or that occurring from obstruction of biliary passages and reabsorption of biliary coloring matters.

As to the former, it is well known that it is accompanied by blood-casts and casts made up of the granular débris of red blood-disks; also by hyaline fibrinous casts. We have never considered these as symptomatic of nephritis, but rather due to coagulated blood-elements.

Again, as to blood-icterus, such as occurs in acute yellow atrophy of the liver and other profound dyscrasic conditions. The existence of this is undoubted, and is believed to be due to rapid disintegration of blood-disks and the staining of the tissues by the dissolved hæmoglobin. It would seem, according to Leyden, that this occurs in cases in which the liver and kidney are too quickly involved in the general process to permit them to eliminate the coloring matter separated by these normal channels in health. Such results Leyden claims to have produced by the intravenous injection of potassium chlorate, in which the kidneys are obstructed and the excretion of hæmoglobin interfered with. This explanation seems to us to be a very reasonable one, and argues against the dissolved hæmoglobin being the cause of a nephritis, as claimed by Litten.

GOUTY NEPHRITIS.

In the discussion which took place in the Berlin Medical Society, January 9th, upon Prof. Virchow's paper, referred to in our issue of February 2d, opinion was not in entire accord with the views of the distinguished Professor. Fürstenheim, especially, claimed that in certain cases of stone in the bladder the calculus is made up of the same acicular crystals of urate of sodium which make up gouty tophi, simply grouped in another way—the fluids holding them in solution until they reach the pelvis of the kidney or bladder, instead of depositing them in the tissues, as in gout. Why one situation is selected rather than another, he does

not say, but suggests that a certain property of the cartilages and ligaments may determine the deposition there in given instances.

Fürstenheim argues that the fact mentioned by Virchow, that those suffering with stone seldom or never suffer with attacks of gout, does not prove that both conditions do not result from the same tendency. And further, that as gout is not confined to the rich or free-living, so calculus is also found among the poor.

It is, perhaps, well that attention has been called to this matter by so conspicuous an authority as Virchow, since it is certain that Fürstenheim is not the only practical physician who has heretofore thought that there was a very close relation between uric acid gravel and gout.

COMPULSORY EXPERT TESTIMONY WITHOUT REMUNERATION.

AMONGST the various trials, annoyances, and ills which beset the path of the medical expert, not the least is that against which the Greene County Medical Society of Alabama recently protested—namely, the right of the Commonwealth to demand, without proper compensation, the attendance and professional advice of the expert. Unfortunately, it seems to be well settled that in most of our States the Court has such power, and that the expert has no redress.

The practice is based upon the English law and custom, which are clearly recognized in the last edition of Taylor, as well as in other standard works upon medical jurisprudence. Prof. Washburn, of the Harvard Law School, states the principle in the following language: "If the case be one of a public nature, involving the question of a crime of magnitude, when the public safety requires the investigation, the right to compel the attendance of such a witness becomes an incident to the exercise of government itself, in the same way that a juror is obliged to sacrifice convenience or profit to render a public service."

There is one point which should be generally understood by medical men, namely, that the law applies only to public suits, and that in *private* suits the Court has no power to enforce the presence of the medical witness. In such a suit, according to an English decision in 1843 (1 *Carrington & Kirwein*, 23), a witness called to depose to a "matter of opinion depending on his skill in a particular trade, has, before he is examined, a right to demand from the party calling him a compensation for his loss of time; and there is a distinction between a witness thus called and a witness who is called to depose to facts which he saw."

Without attempting to go over the oft-travelled ground as to the hardships and rights of the medical expert in this matter, we want to call attention to the fact that the *true interests of the Commonwealth* demand that the medico-legal expert, when employed, should be well paid. There is no greater fallacy than that involved in the belief that because a man is a doctor therefore he is qualified to give advice in medico-legal matters. It is essential, in civilized communities, that there be persons who shall give attention to medico-legal questions entirely outside the ordinary duties of the physician. Unless there is a prospect of proper compensation, men of ability will not labor to acquire the knowledge and experience necessary to fit them for special court duty.

The comparison, often made by those advocating the right to gratuitous expert service, should not be between the medical expert and the juryman, but between him and the judge. No special skill or preparation is required of the juryman, whilst expert and judge alike must devote their lives to the study of the subjects coming before them for decision. The State has as much right to claim, without pecuniary return, the time of a military man to lead its armies, of a lawyer to act the part of the judge, or of a business man to manage the State finances, as it has to demand gratuitous service of the medical jurist. The Commonwealth is but an aggregation of units, *i. e.*, citizens, and when this aggregation demands *especial* service, based upon especial skill, the cost should not be poured *en masse* on the single unfortunate unit, *i. e.*, the expert selected by the Court representing the Commonwealth; but should shower in its infinite subdivisions upon all units alike. The doctor paying taxes bears his share of the common expense, which is all that ought to be required of him.

We believe that the only State whose legislature has had the good sense to see that the true interest of the community requires that justice should be done to the medical expert, is Iowa. The Act of 1873 of that State provides that

> "Witnesses called to testify only to an opinion founded on special study or experience in any branch of science, or to make scientific or professional examinations, and to state the results thereof, shall receive additional compensation, to be fixed by the Court, with reference to the value of the time employed and the degree of learning or skill required."

We opine that the Greene County Medical Society has done well in requiring its representatives to urge the Alabama State Society to use its influence in securing similar legislation in Alabama, and express the wish that the matter may be brought forcibly to the attention of all the various State Societies.

A NEW NATIONAL PHARMACOPŒIA.

THE proposition for a National Pharmacopœia appears to meet with general professional commendation, and the only unfavorable criticism which we have seen is based on trivial grounds or on erroneous views of the power of Congress in the premises. Our friends of the *New York Medical Journal*, for instance, seem exercised over the idea that the proposed National Pharmacopœia is to be rendered legally binding on all citizens of the United States by Act of Congress, and it seeks to alarm the pharmaceutical profession with the notion that every druggist who might vary from the directions of such a work would be liable to prosecution. Our contemporary's views as to the constitutional powers of Congress are evidently very hazy, for it adds that "it seems to us that a standard strength and a standard purity are all that the Government can legitimately enforce in the matter of drugs."

If our friends will refer to Article II. Section viii. of the Constitution of the United States, they will find that their fears are groundless, and that their conceptions of the power of Congress are by far too liberal. The authority granted to that body does not extend to fixing a standard of drugs and preparations which shall be imperative on the medical and pharmaceutical professions. It can, however, provide a standard for its own departments, and this is all that Mr. Randall's bill proposes to do. If, as is to be expected, that standard should prove free from the imperfections of the existing Pharmacopœia, the latter would be naturally superseded; but, in any case, it would be for the professions to determine which of the two should be recognized.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, February 12, 1884.

THE VICE-PRESIDENT, CHARLES MCBURNEY, M.D., IN THE CHAIR.

DISLOCATION OF THE COMMON CAROTID ARTERY.

DR. F. LANGE presented a patient, a woman, forty-seven years of age, who had been troubled with a disagreeable feeling in her throat for about nine months, which she described as a perpetual desire to swallow. She had been treated with internal and external remedies and applications, and called at his office about a week ago, when he examined the throat and discovered what could be readily seen on the posterior wall of the pharynx, on the right side, at the lower edge of the arcus pharyngo-palatinus—a roundish, pulsating tumor. Closer examination showed that it was the common carotid artery, which was dislocated, and could be traced by laryngoscopic examination as far down as the arytenoid cartilage.

There were also hypertrophy of the left ventricle and a decided thickening of the coats of the other carotid artery, which was situated abnormally superficially, and there was some albumen in the urine; and the patient said that about nine years ago she had an attack of acute nephritis. The question was whether the trouble depended upon the anatomical abnormity, and had always existed, or only since the trouble in her throat has been manifested.

On the left side the soft parts are slightly prominent, and are sunk in on the right side. Dr. Lange thought the prominence of the artery on the left side was due to the superficial position of the common carotid artery; moreover, the entire larynx seemed to him to be abnormally movable, especially so as one could pass on the right side the fingers behind the thyroid cartilage and pull the artery out, dislocate it laterally, and push the larynx well over to the opposite or left side. He thought it probable that it was the common carotid and the beginning of the internal carotid which were dislocated. The artery seemed so movable beneath the mucous membrane of the pharynx that, by some pressure from the right side, it would be pushed almost as far as the middle line, passing from there upwards and to the right side in a curved line.

ARTHRITIS DEFORMANS; HYDRARTHROSIS; CORPUS MOBILE; ARTHROTOMY.

DR. LANGE also presented a patient with the following history:

A man, fifty-eight years of age, has been troubled with his right knee for a good many years, and attributes it to a very curious cause, namely, for more than fifteen years he has suffered from a constant feeling of pressure in the region of the rectum, which obliged him to use the chamber-pot very frequently. By and by he fell into the bad custom of so frequently yielding to this sensation that he must have been seated the greater part of the day on a small pot which he used to carry with him. The most thorough examination does not reveal any material change in or about the rectum which might explain this suffering, and I think it to be a symptom of marked hypochondriasis, which of late, through mere exercise of will, has been markedly improved. Now the patient himself thinks that this constant low sitting posture, with much flexed knees—and more so the right one—was a great strain to the latter. By and by it became thickened and abnormally movable; though he could walk, he was unable to use it for lengthy exercise. When I saw the patient in August, last year, his right knee presented, in fact, a grotesque appearance. It was the largest knee-joint I ever saw, except one, and its circumference was twenty centimetres more than that of the healthy side, which was due mostly to fluid within the capsule. The latter seemed much thickened, and so distended, that the upper recess almost reached the middle length of the femur. There existed in the popliteal space a protuberance of the size of about a medium-sized fist, having itself a smaller protuberance the size of a small apple, resistant and smooth, and located behind and above the external condyle. The leg was somewhat œdematous; subcutaneous veins distended. Flexion and extension could be made almost to the normal boundaries. Besides, there existed lateral mobility to such a degree that at each step the knee was

markedly projected outwards, and a strong genu valgum set in. You will see this abnormity still present if the patient removes his apparatus.

Performed arthrotomy in September last by two long, lateral incisions. A large amount of synovial fluid escaped, and such an enormous mass of soft, fibrinous layers that I do not think the latter were less than a pint. They were mostly scraped out by means of a sharp spoon, leaving the synovial membrane thickened, smooth, velvet-like, and highly vascularized. Together with those masses this long body escaped, about the size of a large bean, rough surface, bony, but covered with a very thin layer of cartilage, as you see on the cross-cut. The bony parts and cartilage of the joint presented the characteristic changes of arthritis deformans. Impressions and elevations on the cartilages. The edges of the bone thickened and broadened by irregular pad-like protuberances. The swelling in the popliteal region was hardly affected by the incisions in front, and became only a little smaller. I should have incised also, but contrary to my expectation the patient had lost a great deal of blood, mostly from the highly vascularized and thickened synovial membrane, so that I was obliged to desist for the present from further surgical interference. Drains were inserted, the wounds closed by suture, and the knee immobilized, of course, above an antiseptic dressing. For the first days the discharge of a synovial-like fluid was so ample that the dressing had to be changed almost daily, but healing took place without bad symptoms within about four weeks. The size of the knee has been considerably reduced —according to a measurement two months after the operation, by about thirteen centimetres; at present it is forty-two centimetres, which means twelve centimetres less than at the time of the operation. The swelling in the popliteal space is also decidedly smaller and softer, and you feel in it, here and there, on motion a soft crepitus, as if fibrinous bodies escape under the pressure of the finger. The abnormal lateral mobility has not been improved so far. I have the patient wearing this very solid and strong, double-iron splint from the pelvis to the knee. A counter-pressure is, at the same time, exerted upon the outside of the leg, immediately below the knee, to counteract the tendency toward outward subluxation of the tibia. It seems as if there is some loss of bony substance at the inner condyles, so that a wide gap is formed between them if you force the leg in a straight position. My idea is to maintain this position by the splint, thereby causing pressure of the external condyles against each other and gradual loss of bony substance until both surfaces can meet again to such an extent that the adaptation is perfect. Perhaps complete anchylosis would be the most favorable result to the patient.

Neither any abnormity of sensibility nor of function of the sphincters exists, which might entitle us to assume a spinal origin of the affection.

ADDUCTION AND ABDUCTION IN FRACTURES OF THE NECK OF THE FEMUR.

DR. W. S. HALSTED presented a case of fracture of the neck of the femur with abduction, and a specimen of intracapsular fracture of the neck of the femur from a case in which there had been adduction and one-eighth of an inch lengthening.

He called attention to the necessity of making allowance for adduction and abduction in the estimation of the amount of shortening in these cases. From certain measurements made upon dead and living subjects, he had demonstrated that as abducting the lower limb makes it measure less along the line from the anterior superior spine of the ilium to either malleolus, so adducting it makes it measure more along the same line. Furthermore, that one leg being adducted, the other must be abducted to be brought parallel with it. Hence, in fractures of the neck of the femur with adduction the injured limb might actually measure longer than the sound one; first, because it is lengthened by adduction, and, second, because its fellow is shortened by abduction.

In the case from which the specimen was taken he was enabled to make the diagnosis of fracture because of a recognition of these facts. The injured limb was *apparently* shortened, but by measurement, from anterior superior spine of ilium to malleolus, it was lengthened one-eighth of an inch, although one-fourth of an inch shortened along Bryant's line.

The patient presented with fracture of the neck of the femur and abduction had limbs of apparently equal length. Along Bryant's line the injured limb measured three-eighths of an inch, but from anterior superior spine of ilium, one-eighth, and from the malleolus externus, one and one-fourth inch shorter than the sound one. Dr. Halsted remarked further, that of cases which, measured on Bryant's line, were equally shortened, the adducted limbs would necessitate more of a limp than the abducted ones. In consideration thereof he believed it unwise to allow the limb to remain in an adducted position.

DR. POST remarked with regard to the anatomical specimen, that it would hardly seem probable that such a degree of absorption could have taken place within two weeks unless there had been some previous disease. The specimen itself would seem to indicate that several months must have passed after the receipt of the injury.

DR. HALSTED said the man certified that he had never had any trouble with his hip-joint, and had never been obliged to walk with a limp nor had he received any injury.

ANEURISM OF THE FEMORAL ARTERY; LIGATION OF THE EXTERNAL ILIAC; CURE.

DR. MCBURNEY presented a patient with the following history: A man, fifty-seven years of age, ten years ago received a slight injury over the right femoral artery, high up, and apparently in consequence of that a tumor formed, which has slowly but steadily increased in size, when, at the end of that time he came under Dr. McBurney's observation. The patient had not had any pain or inconvenience from the tumor, but on account of its rapidly increasing growth of late, he sought advice, and in November last came under Dr. McBurney's care, who found a pulsating tumor in Scarpa's triangle, which presented the usual phenomena of an aneurism.

Dr. McBurney advised digital compression, but the patient was not prepared at that time to submit to treatment, and returned to his home in Vermont. After doing considerable hard work, he returned in December, and when Dr. McBurney then saw him he found Scarpa's triangle almost entirely occupied by the tumor, which

also extended outward as far as the external edge of the great trochanter. It pulsated throughout its entire extent. He thought there still was room above the tumor to apply digital compression, which method was faithfully applied continuously for twelve hours by Dr. Woodward and other members of the House Staff, but without avail. He then—on December 20th—ligated the external iliac artery. The operation was performed in the usual way. One noticeable feature about it was that the vessel was so tortuous that it descended below the pelvis as much as an inch and a half, and had to be drawn up in order to throw a ligature about it. The operation was performed under frequent irrigations of bichloride solution, and catgut was used, which was applied about two inches above Poupart's ligament. The gut was an "E" violin string, prepared and given to him by Dr. Briddon. The iodoform-gauze dressing was applied, and the first dressing was allowed to remain six days; at the end of that time it was removed, and the wound was found entirely healed except where the drainage-tube had been inserted. A new dressing was applied, which was removed four or five days afterward, and the subsequent progress of the case was favorable and entirely uninterrupted. Nothing occurred after the operation in the way of interference with the circulation, such as sometimes manifests itself in cutaneous lesions. Dr. McBurney had not been able to find any pulsation or bruit in the tumor since the operation. It had diminished in size somewhat, but just how much he was at the time unable to say. It was nearly eight weeks since the operation was performed, and it seemed to him to be a satisfactory cure.

DR. E. L. KEYES then read a paper on

THE GEOGRAPHICAL DISTRIBUTION OF URINARY CALCULUS, WITH AN INQUIRY INTO ITS CAUSE.

(See page 233.)

Dr. POST said that he had lately received a letter from his son in Beyrout, Syria, in which he stated he had just performed his twenty-first operation for stone, showing that stone is very prevalent in that region, including Syria and the adjacent provinces. All these operations have been performed within fourteen years. There are other operators in that locality, but most of the operations had been performed by Dr. Post, and probably also chiefly in hospital service. The climate is a semi-tropical one.

DR. LANGE exhibited an

ARRANGEMENT FOR HOLDING NEEDLES AND SILK,

which might recommend itself for very fine needles which are used for suture of the intestine, it being rather tedious to arm the needles during the operation. Thread the needles, secure them between two rubber bands of disinfected drainage-tube around an ordinary test-tube, also secure the ends of the silk around the other extremity with another rubber band, and immerse the whole in an ordinary lamp chimney filled with glycerine, and cork with rubber corks. Thus far the needles had not corroded when kept in pure American glycerine, nor had he noticed that the sulphur which the rubber mostly contains had tarnished them.

COMPOUND DISLOCATION OF THE FIRST PHALANX OF THE GREAT TOE.

DR. J. C. HUTCHISON was called to see a man who had fallen from a tight-rope. He visited the patient within half an hour after the accident, and found that he had a compound dislocation, backwards, of the first phalanx of the great toe. The wound was on the inner side, communicated with the joint, and was about half an inch in diameter. All the usual expedients were resorted to for effecting reduction, but without accomplishing it. He then divided the internal lateral ligament, a portion of which seemed to have been torn. Subsequently he divided the external lateral ligament, and still was unable to reduce the dislocation. He then divided, subcutaneously, the tendon of the extensor proprius pollicis, and at once was able to put the bone into position. No splint was used; the toe was simply enveloped with a considerable quantity of cotton-wool, and surrounded with a bandage. At the end of three or four days, the dressing was removed and reapplied. Dr. Hutchison saw the patient walking with a crutch about a week after the occurrence of the accident, and learned that he had a satisfactory recovery. The case was interesting to him, because it was the only one he had ever met with, and it was also one which illustrated the same difficulty of reduction that is observed in dislocations of the thumb.

DR. MCBURNEY asked if the extensor tendon of the toe seemed to be the resisting point.

DR. HUTCHISON said it seemed so, and he had an impression that if he had divided this tendon first, reduction could have been effected without further operative interference.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, February 6, 1884.

THE PRESIDENT, SAMUEL LEWIS, M.D., IN THE CHAIR.

DR. H. C. WOOD read a paper on the

CLINICAL ASPECTS OF CEREBRAL SYPHILIS.

He said that it is naturally to be expected that any cause of ordinary brain inflammation would, when present in a syphilitic person, tend to precipitate a specific cerebral disease. Thus, as thermic fever frequently provokes chronic meningitis, much plausibility attaches to the report of a case in the *Journ. de Méd. et Chir. prat.*, Paris, 1879, p. 291, in which the cerebral syphilis is ascribed to a sunstroke. Blows and other traumatisms would, in a similar manner, be supposed to figure largely as exciting causes of brain syphilis; but he has never met with a case having such relations, and reports of them are rare in literature.

Various authorities attach much influence to overstudy and other forms of cerebral strain in exciting brain syphilis, but neither in private nor public practice has he met with any instance where over-brain work could be considered a distinct etiological factor, and cases of brain syphilis in which any exciting cause can be found are very rare.

The inherited diathesis is less prone to manifest itself in the nervous system than in other portions of the body, but it certainly is capable of causing every type of nervous disease that follows infection from impure coition.

It is a matter of great interest to know how late in life nervous disease from inherited taint may develop.

We have, as yet, little light upon the equally interesting and cognate problem as to how far inherited syphilis may produce late in life nervous diseases whose type is not distinctly specific, but it is probable that even after puberty specific nervous affections may appear for the first time in the unfortunate offspring of syphilitic parents.

Some time since, Dr. Wood saw, in an orphan of fourteen, a chronic basal meningitis, and, in the absence of any history, gave the fatal prognosis of tubercular disease; but to his astonishment, under the long-continued use of iodide of potassium, complete recovery occurred. No signs of inherited syphilis were perceptible, but the specific nature of the inflammation is, in view of the result, scarcely doubtful. It is probable that in some of the reported cases of recovery from alleged tubercular meningitis, the affection has been really syphilitic.

Nervous diseases following acquired syphilitic infection certainly belong to the advanced stages of the disorder. From the third to the tenth year may be considered the period of maximum frequency of nerve accidents.

The fact that cerebral syphilis may occur many years after the cessation of all evidence of the diathesis is one of great practical importance, especially when taken in conjunction with the circumstance that the nervous system is more prone to be attacked when the secondaries have been very light than when the earlier manifestations have been severe. I have repeatedly seen nervous syphilis in persons whose secondaries have been so slight as to have been entirely overlooked or forgotten, and who honestly asserted that they never had had syphilis, although they acknowledged to gonorrhœa or to repeated exposure, and confessed that their asserted exemption was due to good fortune rather than chastity.

Although syphilis is most prone to attack the nervous system many years after infection, it would be a fatal mistake to suppose that brain disease may not rapidly follow the occurrence of a chancre. The minimum possible intermediate period is certainly very brief.

In a case which recently occurred in the practice of Dr. A. Sydney Roberts, of this city, the chancre appeared after a period of incubation of twenty-six days, and two months and eight days subsequent to this came the first fit; eight days after the first the second convulsion occurred, with a distinct aura, which preceded by some minutes the unconsciousness.

The recorded cases show that cerebral syphilis occurs not very rarely within six months after infection, and may be present in two months.

An interesting observation in this connection is that of Dr. Ern. Gaucher (*Revue de Méd.*, 1882, ii. 678) of a spinal syphilis occurring six months after the appearance of a chancre.

Disease of Brain Membranes.—Specific affections of the brain membranes very often declare themselves with great suddenness. The records of the disease present case after case in which an apoplectic attack, a convulsive paroxysm, a violent mania, or a paralytic stroke, has been the first detected evidence of syphilitic cerebral disease. On the other hand, in many instances the symptoms come on slowly and successively.

Headache, slight failure of memory, unwonted slowness of speech, general lassitude, and especially lack of willingness to mental exertion, sleeplessness or excessive somnolence, attacks of momentary giddiness, vertiginous feelings when straining at stool, yelling, or in any way disturbing the cerebral circulation, alteration of disposition—any of these, and *à fortiori*, several of them, occurring in a syphilitic subject, should be the immediate signal of alarm, and lead to the examination of the optic disks. Of course, if choked disk be found, the diagnosis becomes practically fixed, but the absence of choked disk is no proof that the patient is not suffering from cerebral syphilis. There is one symptom that may occur during the prodromic stage, and which, in a person not hysterical, should give rise to the strongest suspicion: this is repeated, partial, passing palsies. A momentary weakness of one arm, a slight drawing of the face disappearing in a few hours, a temporary dragging of the toe, a partial aphasia which appears and disappears, a squint which to-morrow leaves no trace, may be due to a non-specific brain tumor, to miliary cerebral aneurisms, or to some other non-specific affection: but in the great majority of cases where such phenomena occur repeatedly, the patient is suffering from syphilis or hysteria.

It is doubtful whether an acute syphilitic meningitis can ever develop as a primary lesion; whether it must not always be preceded by a chronic meningitis or by the formation of a gummatous tumor; but it is very certain that acute meningitis may develop when there have been no apparent symptoms, and may, therefore, seem to be abrupt in its onset.

Some years ago I saw, in consultation, a man who, in the midst of apparent health, was attacked by violent meningeal convulsions, with distinct evidences of acute meningitis. He was apparently saved from death by very heroic venesection, but after his return to consciousness developed very rapidly a partial hemiplegia, showing that a latent gumma had probably preceded the acute attack. On the other hand, an acute attack is liable at any time to supervene upon a chronic syphilitic meningitis. At the University Hospital Dispensary, I once diagnosed chronic cerebral syphilis in a patient who the next day was seized with violent delirium, with convulsions and typical evidences of acute meningitis, and died four or five days afterwards. At the autopsy an acute meningitis was found to have been engrafted on a chronic specific lesion of a similar character.

In the cases of *chronic meningeal syphilis* which have come under my observation, most usually after a greater or less continuance of prodromes, such as have been mentioned, epileptic attacks have occurred with a hemiplegia, or a monoplegia, which is almost invariably incomplete and usually progressive; very frequently diplopia, from palsy of the ocular muscles, is manifested before the epilepsy. Not rarely oculo-motor palsy is an early and pronounced symptom, and a marked paralytic squint is very common. Along with the development of these symptoms, there is almost always distinct failure of the general health, and progressive intellectual deterioration, as shown by loss of memory, failure of the power to fix the attention, mental bewilderment, and, perhaps, aphasia. If the case convalesce under treatment, the amelioration is gradual, the patient travelling slowly up the road he has come down. If the case end fatally, it is usually by a gradual sinking into complete nerve-paralysis, or the patient is carried off by an acute inflammatory exacerbation, or, as I saw in one case, amelioration may be rapidly occurring, and a very

violent epileptic fit produce a sudden asphyxia. In this form of cerebral syphilis, death from brain-softening around the tumor is not infrequent; but a fatal apoplectic hemorrhage is rare.

The clinical varieties of cerebral meningeal syphilis are so polymorphic and kaleidoscopic that it is almost impossible to reduce them to order for descriptive purposes. Heubner makes the following types:

"1. Psychical disturbances, with epilepsy, incomplete paralysis (seldom of the cranial nerves), and a final comatose condition usually of short duration.

"2. Genuine apoplectic attacks with succeeding hemiplegia, in connection with peculiar somnolent conditions, occurring in often-repeated episodes; frequently phenomena of unilateral irritation, and generally at the same time paralyses of the cerebral nerves.

"3. Course of the cerebral disease similar to paralytica dementia."

In regard to these types, the latter seems clear and well defined, but contains those cases which will be discussed under the head of cortical disease.

Meningeal syphilis, as seen in this country, does not conform rigidly with the other asserted types, although there is this much of agreement, that when the epilepsy is pronounced, the basal cranial nerves are not usually paralyzed, the reason of this being that epilepsy is especially produced when the gummatous change is in the ventricles or on the upper cortex. In basal affections, the epileptoid spells, if they occur at all, are usually of the form of petit mal; but this rule is general, not absolute. The apoplectic somnolent form of cerebral syphilis, for some reason, is rare in this city; and it seems necessary to add to those of Prof. Heubner's, a fourth type to which a large proportion of our cases conform. This type I would characterize as follows:

4. Psychical disturbance without complete epileptic convulsions, associated with palsy of the basal nerves, and often with partial hemiplegia.

Headache is the most constant, and usually the earliest symptom of meningeal syphilis; but it may be absent, especially when the lesion is located in the reflexions of the meninges, which dip into the ventricles, or when the basal gumma is small and not surrounded with much inflammation. That it may continue for years without the development of other distinct symptoms is remarkable. It sometimes disappears when other manifestations develop. It is—except in very rare cases—at least so far paroxysmal as to be subject to pronounced exacerbations. In most instances it is entirely paroxysmal, and these paroxysms may occur only at long intervals. Such distant paroxysms are usually very severe, and are often accompanied by dizziness, sick stomach, partial unconsciousness, or even by more marked congestive symptoms. The pain may seem to fill the whole cranium, may be located in a cerebral region, or fixed in a very limited spot. According to my own experience, any localized soreness indicates an affection of the bone or of its periosteum.

There is nothing absolutely characteristic in this headache; but excessive persistency, apparent causelessness, and a tendency to nocturnal exacerbation, should in any cephalalgia excite suspicion of a specific origin—a suspicion which is always to be increased by the occurrence of slight spells of giddiness, or by delirious mental wandering accompanying the paroxysms of pain.

Disorders of Sleep.—There are two antagonistic disorders of sleep, either of which may occur in cerebral syphilis. Insomnia is more apt to be troublesome in the prodromic than in the later stages, and is not of itself of much significance. Somnolence may occur in non-specific lepto-meningitis, and in states of altered brain nutrition from senile or other degenerations of the walls of the cerebral vessels, and is therefore not pathognomonic of cerebral syphilis, yet of all the single phenomena of the latter disease it is the most characteristic.

As I have seen it, it occurs in two forms: In the one variety, the patient sits all day long or lies in bed in a state of semi-stupor, indifferent to everything, but capable of being aroused, answering questions slowly, imperfectly, and without complaint, but in an instant dropping off again into his quietude. In the other variety, the sufferer may still be able to work, but often falls asleep while at his tasks, and especially towards evening has an irresistible desire to slumber, which leads him to pass, it may be, half of his time in sleep. This state of partial sleep may precede that of the more continuous stupor, or may pass off when an attack of hemiplegia seems to divert the symptoms. The mental phenomena in the more severe cases of somnolency are peculiar. The patient can be aroused; indeed, in many instances he exists in a state of torpor rather than of sleep; when stirred up, he thinks with extreme slowness, and may appear to have a form of aphasia; yet, at intervals, he may be endowed with a peculiar automatic activity, especially at night. Getting out of bed; wandering aimlessly and seemingly without knowledge of where he is and unable to find his own bed; passing his excretions in a corner of the room, or in other similar place, not because he is unable to control his bladder and bowels, but because he believes that he is in a proper place for such act—he seems a restless automaton rather than a man.

Apathy and indifference are the characteristics of this state, and yet the patient will sometimes show excessive irritability when aroused, and will at other periods complain bitterly of pain in his head, or will groan as though suffering severely in the midst of his stupor, at a time, too, when he is not able to recognize the seat of the pain. This somnolent condition may last many weeks.

In its excessive development, syphilitic stupor puts on the symptoms of advanced brain softening, to which it is, indeed, often due. Nevertheless, a prolonged deep stupor in persons suffering from cerebral syphilis does not prove the existence of extensive brain softening, and is not incompatible with complete recovery.

Paralysis.—A specific palsy may be of any conceivable variety, and affect either the sensory, motor, or intellectual sphere. The mode of onset is as various as the character of the palsy. The attack may be instantaneous, sudden, or gradual. It will be usually noted that the palsy is incomplete; in rare instances it may be at its worst when the patient awakes from an apoplectic seizure, but mostly it progressively increases for a few hours, and then becomes stationary.

A suddenly developed *complete* hemiplegia, or other paralysis, may be considered as in all probability either hemorrhagic or produced by a thrombus so large that the results will be disorganization of the brain substance, and a future no more hopeful than that of a clot. On the other hand, an *incomplete* palsy may be rationally

believed to be due to pressure or other removable cause, and this belief is much strengthened by a gradual development.

Morbid exudations, not tubercular nor syphilitic, are very rare at the base of the brain. Hence a rapidly, but not abruptly, appearing strabismus, ptosis, dilated pupil, or any paralytic eye symptom in the adult is usually of syphilitic nature.

Motor palsies are more frequent than sensory affections in syphilis, but hemianæsthesia, localized anæsthetic tracts, indeed any form of sensory paralysis may occur. Numbness, formications, all varieties of parasthesia are frequently felt in the face, body, or extremities. Violent peripheral neuralgic pains are rare, and generally when present denote neuritis.

The special senses are liable to suffer from the invasion of their territories by cerebral syphilis, and the resulting palsies follow courses and have clinical histories parallel to those of the motor sphere. The onset may be sudden, or gradual, the result temporary or permanent. Like other syphilitic palsies, paralyses of special senses may come on suddenly or gradually, and may occur paroxysmally.

Aphasia is usually a symptom of advanced disease, but may be a primary evidence of cerebral syphilis.

Coming on after an apoplectic or epileptic fit, it may be complete or incomplete: owing to the smallness of the centre involved, and the ease with which its function is held in abeyance, a total loss of word-thought is not so decisive as to the existence of cerebral hemorrhage as is a total motor palsy. Like hemiplegia or monoplegia, specific aphasia is sometimes transitory and paroxysmal.

Owing to the centres of speech being situated in the cortical portion of the brain, aphasia in cerebral syphilis is very frequently associated with epilepsy. Of course, right-sided palsy and aphasia are united in syphilitic as in other disorders. If, however, the statistics given by M. Tanowsky (*L'Aphasie Syphilitique*) be reliable, syphilitic aphasia is associated with left-sided hemiplegia in a most extraordinarily large proportion. This concurrence of left-sided paralysis and aphasia probably depends partly upon the great frequency of multiple brain lesions in syphilis, and partly upon the habitual involvement of large territories of the gray matter secondarily to diseased membrane. The conjoint existence of left hemiplegia and aphasia is almost diagnostic of cerebral syphilis.

Amongst the palsies may be considered the disturbances of the renal functions which are met with in cerebral syphilis, and which are probably usually dependent upon the specific exudation pressing upon the vaso-motor centres in the medulla. Fournier speaks of having notes of six cases in which polyuria and polydipsia were present. Servantié reports true saccharine diabetes, and I have seen one such case.

Epilepsy.—Epileptic attacks are a very common symptom of meningeal syphilis, and are of great diagnostic value. The occurrence in an adult of an epileptic attack, or of an apoplectic fit, or of a hemiplegia after a history of intense and protracted headache, should always excite grave suspicion.

Syphilitic epilepsy may occur either in the form of petit mal or of the haut mal, and in either case may take on the exact characters and sequence of phenomena which belong to the so-called idiopathic or essential epilepsy. The momentary loss of consciousness of petit mal will usually, however, be found to be associated with attacks in which, although voluntary power is suspended, memory recalls what has happened during the paroxysm; attacks, therefore, which simulate those of hysteria, and may lead to an error of diagnosis.

In many cases of specific convulsions, the movements are in the onset—or, more rarely, throughout the paroxysm—unilateral. This restriction of the convulsion simply indicates that the fit is due to a cortical organic lesion of some kind.

A specific epilepsy may be replaced by a local spasm. Thus, in one of my cases, the repeated epileptic convulsions ended in a painless tic. The clonic spasms were very frequent and violent, and mostly confined to the left facial nerve. The trigeminus was never affected, but in the severer paroxysms the left hypoglossal and spinal accessory nerves were profoundly implicated in all of their branches. Once, fatal asphyxia from recurrent laryngeal spasm was apparently averted only by the free inhalation of the nitrite of amyl.

Psychical Symptoms.—As already stated, apathy, somnolence, loss of memory, and general mental failure are the most frequent and characteristic mental symptoms of meningeal syphilis; but, as will be shown further on, syphilis is able to produce almost any form of insanity, and therefore mania, melancholia, erotic mania, delirium of grandeur, etc., may develop along with the ordinary manifestations of cerebral syphilis, or may come on during an attack which has hitherto produced only the usual symptoms.

That the attacks of syphilitic insanity, like the palsies of syphilis, may at times be temporary and fugitive, is shown by a curious case reported by D. H. Hayes Newington (*Journ. Ment. Sci.*, London, xix. 555), in which, along with headache, failure of memory, and ptosis in a syphilitic person, there was a brief paroxysm of noisy insanity.

Diseases of Brain Substance.—Very few alienists recognize the existence of a distinct affection entitled to be called syphilitic insanity, and there are some who deny that insanity is ever directly caused by syphilis. It is certain that syphilis is often an indirect cause of an insanity which could not be properly styled syphilitic; but if there be disease of the brain cortex produced directly by syphilis, of course such disease must give rise to mental disorders, and, if the lesion be situated in such a way as to affect the psychic and avoid the motor regions of the brain, it will produce mental disorder without paralysis, *i. e.*, a true insanity: again, if such brain disease be wide-spread, involving the whole cortex, it will cause a progressive mental disorder resembling the so-called general paralysis of the insane, or dementia paralytica.

As a man having syphilis may have a disease which is not directly due to the syphilis, when a syphilitic person has any disorder, there is only one positive way of determining how far said disorder is specific, namely, by studying its amenability to anti-syphilitic treatment. In approaching the question whether a lesion found after death is specific or not, of course such a therapeutic test as that just given is inapplicable. We can only study as to the coexistence of the lesion in consideration with other lesions known to be specific. Such coexistence of

course does not absolutely prove the specific nature of a nutritive change, but renders such nature exceedingly probable.

What has just been said foreshadows the method in which the subject in hand is to be here examined, and the present chapter naturally divides itself into two sections: the first considering the coexistence of anatomical alterations occurring in the cerebral substance with syphilitic affections of the brain membranes or blood-vessels, the second being a clinical study of syphilitic insanity.

Medical literature contains a sufficient number of cases[1] in which cerebral sclerosis was found after death to coexist with undoubted specific lesions of the brain membranes and other parts of the body, to demonstrate that sclerosis of the brain substance not only may coexist with a brain lesion which is certainly specific in its character, but may also present the appearance of having developed *pari passu* with that lesion, and from the same cause.

Cerebral meningeal syphilis may coexist with various forms of insanity; and it is probable that in some of these cases there has been that double lesion of membrane and gray brain-matter; further, if there is a syphilitic insanity, which exists without evidences of meningeal syphilis, and is capable of being cured by anti-specific treatment, such insanity must be considered as representing the disease of the gray matter of the brain.

[An analysis of twenty-three cases of this character was then given by Dr. Wood, but is here omitted for want of space.—Ed.]

Of all the forms of insanity, general paralysis is most closely and frequently simulated by specific brain disease. The exact relation of the diathesis to true, incurable, general paralysis, it is very difficult to determine. It seems well established that amongst persons suffering from this disorder, the proportion of syphilitics is not only much larger than normal, but also much larger than in other forms of insanity.

Those who suffer from syphilis are exposed in much greater proportion than are other persons to the indirect causes of general paralysis: but I think we must recognize as established, the opinion of Voisin that there is a syphilitic periencephalitis which presents symptoms closely resembling those of general paralysis. Such cases are examples of the pseudo-paralysie générale of Fournier.

The question as to the diagnosis of these cases from the true incurable paresis is, of course, very important.

The points which have been relied upon as diagnostic of syphilitic pseudo-general paralysis are:

The occurrence of headache, worse at night and present amongst the prodromes.

An early persistent insomnia, or somnolence; early epileptiform attacks.

The exaltation being less marked, less persistent, and perhaps less associated with general maniacal restlessness and excitement.

The articulation being paralytic rather than paretic.

The absence of tremulousness; especially of the upper lip (Fournier).

The effect of anti-specific remedies.

[1] Analyses of a number of these cases were given.

The absence, however, of these marks of specific disease is not proof that the patient is not suffering from syphilis.

I have seen symptoms of general paralysis occurring in persons with a specific history, in which, of these so-called diagnostic differences, the therapeutic test was the only one that revealed the true nature of the disorder. In these persons a primary, immediate diagnosis was simply impossible.

In conclusion, I consider, as proved, that syphilis may produce a *disorder whose symptoms and lesions do not differ from those of general paralysis; that true general paralysis is very frequent in the syphilitic; that the only perceptible difference is one of curability; that the curable sclerosis may change into or be followed by the incurable form of the disease.*

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 21, 1884.

The President, Fordyce Barker, M.D., LL.D., in the Chair.

Dr. John C. Dalton, President of the College of Physicians and Surgeons, read a paper on

THE DIFFERENCES IN FORM OF THE ADULT HEAD.

A short time ago, he said, he had been interested in a new method of comparing the differences met with in the adult human head, viz., by means of the paper patterns employed by hatters. By the use of the well-known brass apparatus employed by them to take the outline of the head at the level at which the hat was worn, a diagram of the shape of the head, on a diminished scale, and marked out by a series of perforations, was secured. This was then transferred to another machine, by means of which two and one-eighth inches were added on all sides, and the outer circle of upright rods constituted the mould upon which the hat was fitted. A great variety of outlines of heads could thus be made, and he had secured three hundred and sixty of them from one shop in New York. Dr. Dalton then had passed around the room a couple of frames, in which were exhibited a number of paper patterns, exhibiting the most striking differences and variations; explaining that these were somewhat exaggerated in length as compared to breadth, on account of the fact that in the reduced diagrams two and one-half inches were taken off all around, and this would have the effect mentioned.

In regard to the general shape of human heads there were two great classes, the long and the round. A medium head would be represented by the figure 125 for the length and 100 for the width. Taking 100 for the standard of width, all between 120 and 130 in length were medium heads, all above 130 long heads, and all below 120, round heads. Different heads varied greatly in regard to the relative width of the back and front parts, in regard to being curvilinear throughout or presenting some angles and straight lines, and in the symmetrical or asymmetrical character of the two sides. To illustrate these points, Dr. Dalton exhibited a series of eight paper patterns, representing the exact size and outlines of eight different heads. The first was regular

in shape, presenting a curvilinear and comparatively symmetrical oval, which resembled in its general outline that of an egg, with the larger end behind, and the smaller in front. The second presented a squaring of the front part of the head; the temples being decidedly flattened. In many individuals there was actually a hollowing out of the temples, and difficulty was consequently met with in securing a well-fitting hat. In the third, the square front was still visible, but the occiput was not rounded, as in the other two, being somewhat elongated. Consequently the long head was beginning to appear, instead of the medium, and in this instance the length was 135. In the fourth, the extreme of elongation was reached, so far as had been met with by Dr. Dalton, the length being 153. In the fifth, however, there was a round head, which was literally symmetrical, and having the proportion of the length as to the breadth of 108 to 100. In the sixth, the length was 117, and here the occiput was seen to be wider and the front part of the head narrower than in the others. No. 7 was remarkable as being the most unsymmetrical of all; and in No. 8, the length was 128, while there was a broad occiput.

One of the most prominent features in almost all of them was the want of symmetry. This was not always apparent at a distance, but if the paper pattern of the head was doubled, the difference between the two sides could at once be seen. When this test was applied to them all in turn, No. 6 was found to be the most nearly symmetrical. No. 7 was found to overlap towards the front on one side and towards the rear on the other. Want of symmetry, then, was the rule, and Dr. Dalton said he had never yet seen an absolutely symmetrical head. The same thing was true also of the brain, and this fact was one of the first things that would strike anyone engaged in making sections of the organ. If the attempt were made to pass a knife down in the median line, between the two hemispheres, the convolutions of the opposite sides would be found often to overlap, while the cerebellum would be more or less twisted as regards the cerebrum; so that it would be impossible to make a symmetrical section. Again, if a series of vertical sections were made with the utmost care from before backward, it would always be found that one lateral ventricle was opened before the other. All this was not surprising, however, when it was remembered that no face was symmetrical. The student was, therefore, liable to be somewhat misled by the plates and drawings which he was accustomed to see, which always represented the two sides of the brain as perfectly symmetrical.

There were one or two matters of interest connected with this subject, Dr. Dalton went on to say, and one was the fact that these diversities in symmetry were always in one direction. There was to be noted, as a rule, a decided preponderance towards one side, and consequently an apparent twisting of the head in that direction. Thus, if the occiput were flattened on one side, it would be found that the temple would be flattened on the other. In several cases a twist towards the left side was marked, and out of twelve instances in which the head was perceptibly twisted, in nine the obliquity was towards the left, and in only three towards the right. This inclination to the left, therefore, seemed to be marked in the crania met with in New York. Whether the same would hold true of the heads of persons living in other parts of the world, he was unable to say. A similar remark would apply to the relative proportion of the long and short axes of the head. In New York there was a decided preponderance of the long head. He had found that 64 per cent. of the heads studied were medium, or with a long diameter between 120 and 130. Below 120 there were 10 per cent., and above 130 26 per cent.; so that the long heads outnumbered the round ones in the ratio of at least 2½ to 1. In other countries the results might, of course, be different.

These differences between the two sides of the same head and between different heads are of interest, again, in connection with the hypothesis which was now very generally accepted, that all parts of the brain did not have the same functions. The doctrine of cerebral localization recognized that the gray matter in some parts of the brain performed different nervous actions from that in other parts. There are, thus, motor centres and perceptive centres, and it was believed that this difference in function was connected with a difference of structure; the cells of the motor tract, for instance, being different from those of any other part in character and arrangement. From the external examination of a long head it might very naturally be supposed that there was a larger quantity of gray matter in the cerebral substance than in a round one, because a long one presented a surface of greater extent than a short one. This might, indeed, be true if the external surface of the brain was smooth. On the contrary, however, we know that the cortical layer of brain tissue was not smooth, but convoluted; and in the brain contained within a round head the fissures might be deeper, and the foldings more numerous and complex than in one belonging to a long head. The shape also varied in other ways, as in the length of the vertical diameter, and, therefore, we could not conclude that because a head was round and compact, the brain contained less gray matter than a long one.

There was still another consideration of even greater importance. The motor centres might be precisely the same in structure, while the fissures might be either deep and narrow, or shallow and broad; so that there might be exactly the same amount of gray matter in two brains which were of very different form. These points were worthy of consideration, he thought, when it was remembered that differences in form might be due purely to external causes. In certain tribes of Indians it was well known that the heads of the papooses were artificially compressed in certain directions, and, consequently, as the head increased in size, it would, of course, grow in those directions in which this resistance was not opposed. The result thus obtained was simply an exaggeration of the natural differences which had now been pointed out. Among the Cherokee Indians the front part of the head was compressed, so that there was apparently no forehead, while among the Natchez the back part of the head was compressed, so that from the external form one would say that there was no occiput or cerebellum; yet as regards function there was absolutely no difference between the brains in the two forms of heads.

THE PRESIDENT remarked that he had not known, beforehand, in what direction the investigations of Prof.

Dalton would lead, and he had not therefore prepared himself specially to make any contribution to the subject now before the Academy; but he thought it might be of interest in connection with it, to recall that some years ago, probably fifteen or twenty, the *Obstetrical Journal* had published a number of papers by Mathews Duncan, and other writers of eminence, in regard to the influence of parturition in forming the shape of the human head. To obtain what light he could upon the matter from a practical investigation, he made some inquiries in connection with the lying-in department of Bellevue Hospital, with the aid of the House-staff. During a service of nine or ten months, the heads of one hundred and thirty-two infants were examined immediately after birth, and again at the expiration of eight days. As was well known, about eighty-five out of every one hundred children born, presented with the head in the left occipito-anterior position, and that during the process of parturition, especially in tedious labors, the form of the head became moulded and adapted to the maternal parts and often greatly changed. There was great compression of the long diameter, and a corresponding dilatation of the short; while there was a marked bulging out of the right side of the head to fill the unoccupied space left in the right oblique diameter of the pelvis. Of course, the pressing out of the head would be in the opposite direction in the right occipito-anterior position. At the time mentioned, the question was discussed a great deal, whether this compression during labor permanently influenced the head or affected the functions of the brain afterward. In the investigation made at Bellevue Hospital, it was found very generally that the disproportion between the two sides of the head which was noted immediately after birth, had disappeared by the end of eight days, but in some instances this disproportion was more or less prolonged. Dr. Barker said that if he saw a child (whose delivery he himself had not attended) within forty-eight hours after birth, he could almost invariably tell from the shape of the head whether the occiput had pointed towards the right or the left, provided there had been an anterior position of the vertex. In posterior positions the case was different, on account of the rotation which was requisite before the head could be born. Whether any difference in function was occasioned by the compression and change of shape resulting from parturition, he was not prepared to say. There was another point to which he would call attention for a moment. He would like to know whether if, ten years from now, Dr. Dalton presented diagrams of the same heads which he had to-night, the outlines would be precisely the same as at the present time. For his own part, he felt pretty sure that the form of the head changed more or less in adult life, and more at an advanced period of life. He had been led to this opinion by the fact that his hatter had found, in his own case, that his head changed from time to time.

DR. LEONARD J. CORNING considered the researches of Dr. Dalton of deep interest because, in the first place, they showed a most perfect method of investigating asymmetry of the cranium; and, secondly, on account of the inferential remarks which he had offered in regard to the possible effects resulting from differences in symmetry. His idea that external compression did not have the effect of causing a dwarfing and atrophy of the portion of the brain beneath, but that these parts were simply pushed into other locations was a very suggestive and valuable one, he thought. The hypothesis that the form of the brain had not so much to do with its functions as the amount of surface presented by the gray matter, whether spread out over a wide area or over deep and complex convolutions was one that was fraught with the deepest interest. It was exceedingly common at the present day to bring up at criminal trials, where the sanity of the prisoner was in question, the idea that asymmetry of the head indicated an unbalanced brain, and he thought that a great deal of capital had been made out of this without any measurable basis of facts upon which to found data. In the case of Guiteau, for instance, he had never been satisfied as to the validity of the argument that because his head was asymmetrical he was not of sound mind; and he thought, therefore, that Dr. Dalton had rendered to science a very valuable service in advancing this hypothesis. It seemed to him that it was plain that there might be flattening in one part of the cranium and protrusion in another, and yet the organs beneath be presumed intact; and he thought, therefore, that weight had been attached to this matter of asymmetry which was not warranted by facts.

DR. DAVID WEBSTER said that in his own case he had noticed that he required, from time to time, slightly different sizes in his hats, but he had supposed that this was probably due to the amount of thickness of the hair at the time. He would like to inquire whether Dr. Dalton had noticed any changes in adult heads.

DR. DALTON, being called upon to close the discussion, said that this idea of changes in the adult head suggested by Drs. Barker and Webster, was a new one to him, but it was a very interesting one, and one that he would like to see investigated. It was well known that other parts of the body differed very materially as life advanced, and it was quite possible that this might be the case with the cranium also. It seemed to him extremely probable, from what Dr. Barker had said, that the twist which the head of the child received during parturition disappeared shortly after birth, but that in a few cases the obliquity remained permanent. As the result of his investigations, he would say that we could not conclude from the existence of asymmetry in the cranium that there was a corresponding difference in the brain itself.

DR. P. A. MORROW then read a paper entitled

AN IMPROVED METHOD IN THE TREATMENT OF CERTAIN FORMS OF SKIN AFFECTIONS.

The method referred to, he said, was the application of medicinal substances by means of fixed adhesive dressings. Among these dressings were the application of drugs in combination with collodion and gutta-percha, and by means of gelatine, which could be rendered more pliable by the addition of glycerine, then painting a layer of the medicinal substance required over the part and covering it with a layer of collodion, and the incorporation of the drugs with adhesive plaster, the basis of which was gutta-percha. There was nothing of novelty to dermatologists in all this, but the method had only come into use within the last year or two, and since it was not alluded to in any of the text-books on diseases of the skin, he thought that it might be of interest to the

profession at large to present it. He claimed nothing original in what he had to say, except so far as his own experience confirmed the observations of others, and his aim was simply to present, in a brief manner, the mode of preparation of the dressings alluded to, the conditions in which they were appropriate, their therapeutic value, and the clinical results which had been obtained by their use.

This method of making fixed adhesive applications, he believed, was undoubtedly a decided advance in the field of cutaneous therapeutics. The old modes of applying medicinal substances, while admirably adapted for their purpose in many respects, and still the best in a large number of cases, had certain disadvantages. Thus, when drugs were employed in the form of powder, the powder was easily rubbed off, and if applied over an exuding surface an irritating crust was very liable to be formed; while lotions quickly evaporated. The ointment had, as a rule, always been the most efficient and convenient form in which to make applications to the skin; but this, too, was easily rubbed off, and was in a measure a cumbersome and uncleanly dressing. Dr. Morrow then quoted a passage from Erasmus Wilson in regard to the influence of fashion in cutaneous therapeutics. At one time there was a great outcry against the use of all sorts of unguents, and the water-dressing was unduly lauded. The ointment, however, survived the attacks made against it, and again came into general use; but still it would always be open to the objection of uncleanliness, and of being offensive to the taste of the fastidious. Again, it was impossible to give ointments sufficient solidity to exclude the air, and by diffusing themselves over healthy skin in the vicinity of the lesions to which they were applied, they were very liable to propagate disease. At the same time, he did not mean to detract from the real and substantial efficiency of this kind of application, for which in many conditions no equally good substitute had as yet been found. The fixed dressing was not designed to revolutionize the treatment of skin disease, but simply to supplement the older methods in use, and its application was without doubt comparatively limited.

Dr. Morrow then went on to say that cutaneous pharmacy had not kept pace with that of internal medication, but of late much improvement in this respect had been noted. He then enumerated some of the drugs which, during the past few years, had gained repute in cutaneous therapeutics, such as chrysarobin, pyrogallic acid, salicylic acid, iodoform, and naphthol. Some of these were very powerful agents, and it was necessary not only to be familiar with their properties, but to know how to use them. Chrysarobin was undoubtedly the most efficient remedy now at our command for the treatment of psoriasis, especially in chronic cases and those which had resisted other forms of treatment. Its range was limited, however, as it was contraindicated in acute cases generally, in children, and in patients with tender and irritable skins; while if applied to the head it was apt to produce puffiness of the face and eyelids and conjunctivitis. As ordinarily applied, it was very irritating to the surrounding skin, discolored the hair, and stained the clothing and everything with which it came in contact. So successful, however, was the effort to obviate these inconveniencies and injurious effects by combining the remedy with collodion and gutta-percha —for which the credit was largely due to Dr. George H. Fox—that it led to the combination of a number of other drugs with the same class of substances, and to the establishment of fixed adhesive dressings as a recognized method of treatment in diseases of the skin. The medicated collodions had the advantage of being always ready for use, as well as perfectly cleanly. Pick, of Prague, was the first to make use of gelatine for the same purpose. Fifty parts of gelatine were dissolved in a hundred of water, and to this the medicament to be used was added. When the preparation was to be applied, it was first placed in a convenient vessel and dipped in hot water. This constituted an admirable and flexible dressing, and it could easily be removed by the application of hot water. Pick claimed that it had the advantage of being transparent, so that the lesion under treatment could be viewed through it. This transparency, however, Dr. Morrow had found a rather uncertain element, depending upon the drug which was combined with the glycerine. Unna, of Heidelberg, had modified Pick's gelatine dressing by adding to it five, ten, fifteen, or twenty per cent. of glycerine, according to circumstances. Dr. Mitchell, of Philadelphia, now manufactured gelatine plasters of various kinds, with which he had obtained very satisfactory results. The only objection that he had found to them was that they sometimes deteriorated by keeping; but he thought that this difficulty could probably be easily obviated by the addition to them of a small quantity of salicylic acid, or other antiseptic. Those which he at present was using were made by Messrs. Hays & Sons, of New York. Prof. Auspitz had devised a useful dressing which he designated *traumaticin*. It was a ten per cent. solution of refined gutta-percha dissolved in chloroform, and resembled the *Liquor guttæ perchæ* of the United States Pharmacopœia. It was claimed for the traumaticin that it was a delicate, neutral, durable, and invariable dressing, which was more elastic than gutta-percha plaster. The latter was a decided improvement over the ordinary lead and resin plasters, and was of especial service in certain localized disorders affecting the hands and fingers, the crease of the thigh, the toes, the anus, etc.

Dr. Morrow next proceeded to speak of the verdict of clinical experience in regard to the new methods. In psoriasis, he said, the results obtained by the use of chrysarobin in connection with them had proved eminently satisfactory. He spoke of the success achieved with it in the treatment of chronic eczema, prurigo, tubercular syphilis, and other affections by Auspitz, Benier, R. W. Taylor, and others. He also mentioned some of the results obtained, in Europe, with naphthol, salicylic acid, and other remedies, and said that iodoform collodion was used in immense quantities at Billroth's clinic. He then spoke of his own experience, and said that in psoriasis, as well as in chronic eczema with excessive pruritus, he had for the most part met with very satisfactory results with chrysarobin. In acute eczema he had been much pleased with the use of a gelatine dressing containing ten per cent. of oxide of zinc, and he related a case of chronic eczema of the face with extreme itching, in which a single application of this, with the addition of one per cent. of carbolic acid, gave complete and instant relief. Each form of application which had been mentioned, he said, had special advantages in certain cases and conditions, and

he then gave a summary of the advantages of these methods somewhat as follows:

1. The complete protection of the part, and exclusion of air.

2. The securing of the direct action of the drug employed upon the parts affected.

3. The maintenance of a gentle and uniform compression.

4. Complete cleanliness.

The following general conclusions were reached by Dr. Morrow:

1. The adoption of the method of fixed adhesive applications marks a decided advance in cutaneous therapeutics.

2. It is admirably adapted for certain special purposes.

3. It constitutes the most efficient means of treating hyperæmic conditions accompanied by epithelial aggregations, derangements of the capillary circulation in certain neurotic conditions, and in circumscribed lesions generally.

DR. BRONSON said that what he particularly admired in Dr. Morrow's paper was the conservative manner in which he had dealt with the subject. The method under discussion was now the fashion, and the chances were that the thing would be overdone. The writer had said almost all that there was to be said upon the subject, and he had done it well. The method was not one capable of universal application. In regard to the gelatine preparations, he differed somewhat from Dr. Morrow, as he considered them of comparatively little value. It was quite difficult to prepare them for convenient application; but the case was different with the gutta-percha and collodion preparations, which were easy to apply, and which he thought would, in time, entirely supersede the gelatine of Pick. He could fully endorse Dr. Morrow's statements in regard to the efficacy of the method in general, and he believed that it was best suited to diseased conditions in which there was a certain degree of thickening and the presence of an accumulation to be removed. He did not think the value of the preparations mentioned depended on the protection which they gave so much as on the facilities which they afforded for coaptation of the remedy to the part affected. There was another disadvantage connected with the use of the gelatine, more particularly in cases in which there were fissures, which he had neglected to mention, and that was that it acts too quickly. Chrysarobin or chrysophanic acid required to be rubbed in very thoroughly, and while the use of the gutta-percha and collodion permitted this, with the gelatine there was not time for it. In addition to psoriasis, he considered this remedy of special value in two affections: in eczema of circumscribed area, without much weeping, and characterized by marked itching, and in lichen planus, attended with intense itching. Carbolic acid could be employed in very much greater strength when combined with these fixed dressings than in any other way.

DR. G. P. JACKSON said that he had found so much difficulty in applying the gelatine preparations that he had now given them up, and in the few cases in which he had used them the results had not proved satisfactory. The collodion preparations he had employed with success, particularly in psoriasis and eczema.

DR. SHERWELL, of Brooklyn, thought that there would be difficulty in applying these medicated preparations in certain circumstances, as, for instance, the gelatine over exuding surfaces, or the collodion upon the hairy scalp.

DR. MORROW then closed the discussion. Dr. Bronson's criticism in regard to the gelatine preparations, he said, might be reasonable from his stand-point, but he himself did not find any inconvenience in using them. Their efficiency depended largely on the careful preparation of the glycerine and gelatine, as well as the drugs used in combination with them. The first preparations which he had employed were all defective, and if he had rested content with this first experience, he would, no doubt, like Dr. Jackson, have given up the use of gelatine altogether. With those which he now used in his practice he secured an admirable elastic coating, which remained for a number of hours. With regard to Dr. Sherwell's objection to using gelatine over exuding surfaces, the difficulty was merely a theoretical one, which he himself had anticipated before applying it under these circumstances, but which he had found by experience did not exist practically. He thought that as the pharmaceutical preparations became more perfect, gelatine would be more generally used than it was now.

As to the difficulty of applying collodion or gutta-percha to the hairy scalp, if the affected part were not free from hair, as was likely to be the case, it was his custom to have it shaved or the hair cut close with the clippers used by barbers. He had not ventured to apply chrysarobin to the scalp after one or two unfortunate experiences which he had had with it; although when used in combination with these fixed dressings he believed that no ill-effects would result from its use in this position. There was a theoretical objection that with a layer of gutta-percha or collodion between the drug and the diseased surface, the remedy might not produce its appropriate effects; but practically it had been found that this was not at all valid. A parallel case was seen in the vesicating action of cantharidal collodion, and another proof was seen in the case that Pick had reported, in which systemic poisoning was produced by pyrogallic acid applied by this means.

CORRESPONDENCE.

"A YEAR'S WORK IN OVARIOTOMY."

To the Editor of THE MEDICAL NEWS.

SIR: I thank my friend, Dr. Sutton, for correcting a careless slip of my pen, and for the explanation of his remarks from which the misquotation was made. I also wish here to beg Mr. Tait's pardon for misrepresenting him. Yet, in self-defence, let me say that I think that my interpretation of Dr. Sutton's remarks was not altogether an illegitimate one. The inference that I drew from them was, until explained otherwise by Dr. Sutton, that Billroth was the only European operator who did not refuse any case of ovarian tumor, however unpromising it was.

Dr. Sutton's remarks are as follows: "Dr. Keith employs only one assistant, and Mr. Tait uses one. In Billroth's clinic there are a great number of assistants, but it must be recollected that he refuses to operate upon nothing that deserves the chance of life, and his

statistics approach more nearly to the statistics of our own country than those of any other operator abroad. Sixty-five per cent. of recoveries are about as good a showing as he can give in laparotomy. But I will say this: That in no place did I see such cases operated upon as were operated upon by Billroth. He operates upon everything. So far as Mr. Tait is concerned, he *does* not remove *many* [the italics are mine] large tumors—those which weigh from sixty to sixty-five pounds, with extensive adhesions, etc." [1]

I fully agree with Dr. Sutton, that private hospitals are better places for abdominal operations than the patient's own home. Yet, the greater mortality of those of my cases operated on at their homes, I attribute less to hygienic causes than, first, to the extreme prostration of the women who, after several tappings, were too ill to travel; secondly, to my being assisted by those who were not familiar with the technics of the operation; and, lastly, to my not having the after-care of these cases.

Very respectfully,

WILLIAM GOODELL, M.D.

February 27, 1884.

NEWS ITEMS.

CINCINNATI.

(*From our Special Correspondent.*)

BURKISM.—Never in the history of this city have the annals of crime exhibited so many or such brutal murders, as during the past winter. The last of these, a triple murder, has kindled in Cincinnati much the same furor as was aroused in Edinburgh, in the early part of this century, when first the crimes of the infamous Burke became known.

On the afternoon of February 15th, a negro who has been engaged for several years as a resurrectionist, called upon the Demonstrator of Anatomy in the Medical College of Ohio, and offered to bring him three subjects. Early the same evening he went with an accomplice, to the house of an aged colored man, who lived with his wife and an adopted daughter, in Avondale, in the suburbs; these three they killed and immediately took their bodies to the college, firing the house to conceal the crime. The marks of violence upon the bodies were not sufficient to attract attention without closer examination than is usually given to subjects when received, and the suspicions of the Demonstrator were not aroused until almost a week after; he was notified by the police that no bodies had been found in the burned building, and he was asked to examine any bodies he had received for marks of violence. He then notified the authorities, and has since identified the negroes who sold him the bodies. These have confessed the crime. The newspapers, particularly one or two sensational sheets, have been ever since filling their columns with abusive articles, intended to injure as much as possible, not only the Demonstrator, who unfortunately is so immediately involved in the case, but also the entire Faculty and the College itself.

During the last few years a large part of the material has been provided by a Practical Anatomy Act, which permits the giving of unclaimed bodies to the colleges, and it is believed the supply thus provided for would be sufficient to meet the demand, but the authorities of many of the public institutions appear determined to avoid complying with the law. The necessities of medical education, therefore, have made it customary to receive bodies from resurrectionists as well. Now that legislation on medical questions is becoming the fashion, we may perhaps have an amendment to the Act, so as not only to permit but to compel the giving of bodies to the colleges, and thus make the law similar to that which now prevails, with such excellent results, in Pennsylvania.

[1] Transactions of the American Gynecological Society, vol. viii. p. 84.

CHICAGO.

(*From our Special Correspondent.*)

RUSH MEDICAL COLLEGE.—The annual commencement exercises of Rush College occurred on the 19th instant. The number of graduates was one hundred and sixty-seven, one receiving the honorary degree. The gentleman on whom this was conferred was Dr. A. L. Justice, of El Paso, Texas.

The Alumni of the College were entertained in the evening at a banquet at the Grand Pacific Hotel. Four hundred alumni and friends of the College sat down to this dinner. Subsequently a life-size portrait of President J. Adams Allen was presented to the Faculty.

The hospital, which was begun by the Trustees of Rush College, adjacent to the College building, has been transferred to the Presbyterian order, and will be known as the "Presbyterian Hospital." It is being rapidly pushed forward to completion, and ought to be ready for occupancy in eight weeks. The College Faculty retains professional control of it.

SCHOOL OF OPHTHALMOLOGY AND OTOLOGY.—The medical staff of the Illinois Charitable Eye and Ear Infirmary, located here, have established a school of ophthalmology and otology for practitioners. The course of instruction will consist of didactic lectures and drill, and daily attendance upon the service of the Infirmary, which offers the amplest possible clinical opportunities. Probably more than two hundred different patients are treated each day in the rooms of this institution. Of these, slightly more than half are out-patients. The staff consists of Drs. Holmes, Hotz, Ware, Montgomery, Schaefer, and Bishop, surgeons; Drs. Gardiner, Bettmann, Gilmore, Colburn, Harper, Kewley, and Morgan, assistant surgeons.

ANATOMICAL MATERIAL AND THE ANATOMY ACT.—Perhaps at no time before, in Chicago, has there been so much public talk and discussion of the subject of anatomical material as this winter. The colleges have had some difficulty in procuring a sufficient supply, but have generally succeeded, and their classes will go out having fulfilled the requirements as to dissections. There is a State law which permits the bodies of unclaimed paupers to be used for anatomical study. For ten years the law has been in operation, and the colleges have not been under the necessity of obtaining material elsewhere till this season. Now the County Commissioners who elect, and hence control, the wardens of the county hospital and county almshouse, have forbidden these officials paying respect to the law on pain of dismissal. As a result, the colleges have to pay high prices for

material, which has led to activity among those willing to engage in the business of procuring subjects. Two medical students are now in jail in DeKalb County for resurrecting. Their case is peculiarly unfortunate, because, if they are guilty, their conduct was both unnecessary and reprehensible. The bodies of two persons well known were stolen and brought to Chicago. Their discovery in the colleges here led to much excitement.

MUNICH.

(From our Travelling Correspondent.)

THE HYGIENIC INSTITUTE IN MUNICH was the first one built in Germany for the practical teaching of hygiene, where it could be taught in an objective manner, and where students could be made familiar with the various procedures, modes of investigation, etc., involved in its scientific study. Now there are three or four similar institutions in various places in Germany, a large one is being built in Vienna, and Prague will probably have two, one for each university. The building in Munich is a handsome brick structure, and cost when complete eighty thousand dollars. The course of study given in the Institute is not obligatory on the medical students; only those intending to enter into the service of the State being obliged to pass a practical and theoretical examination in hygiene. The course given to such students is a rather thorough one, embracing the study of the air, water, ground, clothing, food, etc., in their relation to health. The examination of the ground with reference to its moisture, the height at which the ground water stands, the organisms it contains, receives here great attention.

THE SPREAD OF LOWER ORGANISMS IN THE GROUND.—A very interesting series of experiments have just been concluded by one of the assistants, on the spread of lower organisms in the ground, their ascent from a depth below the surface to the surface, and the circumstances which favor or are inimical to this. A flask of sterilized nourishing solution was connected by a glass tube containing sterilized earth of a known composition, with another flask which contained a fluid containing certain definite bacteria. The sterilized flask was above the other, and the end of the tube containing earth projected above the surface of the fluid; the other end passed into the fluid containing the bacteria. By placing some of the earth from the end of the tube in the sterilized solution, it could easily be seen when it contained organisms. These, of course, could only have ascended through the earth. As the bacteria used were a known and easily recognized species, there was no danger of mistaking an accidental infection for the result of the experiment. It was found that conditions favoring capillary attraction, the fineness of the particles of earth, also most favored the ascent of the organisms.

These experiments are, of course, of especial interest in regard to the ascent of pathogenic bacteria from the body of the cadaver to the surface of the earth. Pasteur, as is well known, sought to account for this by his rain worm theory, that the worms in their passage through the soil ate the spores, and on reaching the surface discharged them in their moulds, a theory which was certainly very brilliant in its conception, but not supported by facts.

In the investigation of water, besides its chemical constitution, particular study is made of the organisms contained in it. Pure cultivations of these are made after Koch's gelatine method, and then they are studied as to their physiological action by inoculations on animals.

RELATIVE VALUE OF THE VARIOUS CLOTHING TEXTURES.—Another of the assistants was carrying out an elaborate system of experiments on the relative value of the various clothing textures, especially with the so-called normal clothing of Dr. Jäger. This consists entirely of woollen materials, the stockings, drawers, and undershirt being made in one piece. Every toe in this remarkable garment is enclosed in its own particular—well we can hardly say toe, nor even finger, but the stockings are like gloves. Over this a woollen shirt is worn, and the outer clothing is made out of a particular woollen cloth, and the coat and vest button close up to the chin. The clothing may be immensely comfortable and healthy, but it is not handsome. The experiments were to determine how much real value the system had.

THE CHOLERA EPIDEMIC IN EGYPT.—The following account of the recent cholera epidemic in Egypt, and the means employed for its suppression, has been furnished to the State Department by the Consul-General at Cairo, and forwarded to the Marine-Hospital Service for its information:

"With reference to the painful and widespread epidemic which affected all classes of the population of Egypt last summer, I beg to submit to you the following carefully made observations respecting its development and character.

"I must begin by saying, Egypt is a country in which hygienic or sanitary regulations have for a long time been, and still are, entirely neglected. There obtains here a condition of things most unfavorable to health, due to the apathy and almost criminal negligence of the authorities, and to the habitual want of cleanliness of the native population; that which is unclean and impure, the dregs and refuse of dirty water, are deposited in the public streets, the open squares, and narrow passages of all the towns and villages in Egypt. The construction of underground conduits or sewers to carry away water and impurities was never projected in any Egyptian town or village. The inevitable consequence was, that in the houses of the natives most unhealthy and impure elements have been prevalent for a prolonged period. In the respectable European quarters of the towns is there only an exception of the regulations for the protection of the public health.

"The Nile Delta, by reason of its well-known insalubrity, would be a district of permanent abode for contagious disease if the great heat which is so prevalent did not counteract miasma, and if the clear air of the desert did not, likewise, frequently and thoroughly purify the atmosphere.

"Since the reign of Mohammed Ali, the first Viceroy of Egypt, sanitary regulations and ordinances for protection of the public health have often been promulgated, and the efforts of European physicians exerted to ameliorate this condition as far as the popular and re-

ligious sentiments of the country would permit. But since the revolt of Arabi Pasha against the constituted authority, when most of the European functionaries were removed from office in order to make room for incapable natives, the direction and control of the sanitary public passed into the hands of Arab doctors, whose want of knowledge and venality interfered with its efficient working. Previous to 1879, the year in which Tewfik Pasha, the present Khedive, ascended the throne, the Sanitary Board in Alexandria was under the direction of a European doctor and a representative European council, lay and medical.

"As already explained, about three years ago, the sanitary service became an arrangement of purely native origin, and was stationed in Cairo. A sanitary maratime and quarantine council, composed of delegates from the different consulates, and under an Arab director, was likewise formed in Alexandria after a protest of the consuls in that city who are in the service of the various European States. The council of Alexandria does not examine or consider matters which relate to the discovery and application of remedies for diseases. Its sole purpose is to prevent the sudden appearance in Egypt, from foreign countries, of epidemics, and, in such an event, to order the necessary preventive measures to be taken. Such was the condition of the public health, and such the character of the sanitary authorities, when the cholera broke out at Damietta, towards the end of June last.

"Cholera has invaded Egypt in the form of a great epidemic five times since its first appearance, which occurred in the year 1848. It had always been introduced from Asia, especially from India, which is its natural home. Several times cholera has made its appearance in adjacent countries. And two years ago it was even brought into Egyptian territory by pilgrims from Mecca; but, owing to the strict precautions taken, and to quarantine regulations, this country escaped the dreadful calamity.

"In 1883, some very adverse circumstances contributed to the introduction of cholera into Egypt and to its rapid development. The insurrection which broke out in June, 1882, made worse the bad hygienic condition of the country. This was followed by epizooty, a strong bovine typhus, which was prevalent to the end of November, 1883. Thousands of animals fell victims to said disease, and many hundreds, not to say thousands, of them were thrown and left to decay in the canals, the waters of which were made use of to irrigate the fields and to meet the daily necessities of the neighboring population for drinking purposes. These are the acknowledged causes which have subjected Egypt to this baneful and troublesome epidemic. Its invasion is to be ascribed to the policy adopted by the British authorities, who never permitted any restrictions to be used by the Egyptian sanitary authorities which would interfere with their Indian trade; consequently, the Government of Egypt was compelled to allow the free passage of vessels engaged in the trade through the Suez Canal, and to stop at its different ports.

"During the months of May and June of last year, there was at Bombay and Calcutta a recrudescence of cholera, which had a tendency to assume an epidemic form. The sanitary maritime and quarantine council at Alexandria having been apprized of the impending danger, and energetically pressed by the Turkish sanitary authorities at Constantinople, proposed some measures and quarantine regulations to be applied to all vessels coming from India. But the English government, whose influence in Egypt is unlimited, has, in several ways, prevented the execution of the projects of the above-mentioned council of Alexandria, and, in consequence, every vessel arriving from India had free communication with all ports of the Suez Canal. This unrestrained and direct communication of Egypt with countries in which cholera prevailed, was the real cause of the importation of the disease.

"Another and a local cause of the development of this malady and its rapid spread, was occasioned by the following circumstances: Damietta, where the cholera last year first appeared, is an exceedingly unhealthy town. The exhalations there from decaying matter cause, every summer, ophthalmia and dysentery. It is also subject, during spring and summer, to the kamsin, a most oppressive hot wind, which carries with it clouds of dust and sand. When the cholera which, according to the official report, appeared at Damietta on the twenty-first of last June, in a very short time it became alarming in its progress. No remedies were employed. There was a thorough absence of medical attendance, and the poor natives, not knowing how to treat it, obstinately abandoned themselves to fate, and perished by thousands. About the middle of last June a great fair was held at Damietta, which attracted over fifteen thousand visitors from neighboring and distant villages. At the time this fair was held, several Indians visited Damietta for purposes of trade, and also a certain number of coalmen and firemen employed on English steamers coming from Bombay. According to authentic sources of information, these are the circumstances which favored the rapid development of this insidious disease.

"In conformity with the advice of native doctors, the Egyptian Government immediately formed sanitary cordons around the infected districts, in the hope of checking the spread of the epidemic. These sanitary cordons, however, served practically no purpose. They were insufficiently well organized, and could not prevent intercourse taking place with towns and villages where this pestilence prevailed. These cordons fell into disuse when the cholera, following the high roads of travel by river and railway, reached Cairo, whence it extended in length and breadth over Lower and Upper Egypt, with the exception of Alexandria, which subsequently was also invaded, and where, indeed, this epidemic proved to be less violent than elsewhere. This was due to the sanitary measures taken by the European Colony.

"On the first appearance in that city of this epidemic, there was formed a sanitary commission by the consuls and prominent members of the European Colony, presided over by a Minister or Governor, upon whom the Egyptian Government conferred full power to adopt effective measures for preventing the breaking out and progress of the disease. Owing to the pecuniary means placed at its disposal by the Government and private individuals, this Commission rendered great service to the inhabitants. In Cairo there were also two international commissions, based on the same principle as that of Alexandria, of which one was composed of ministers, English generals, and high functionaries, European and

native; the other one was formed of consuls of the different powers and prominent members of the European colony, and placed under the presidency of the prefect of police. This last commission has labored with the greatest energy and zeal in the execution of its task. It had at its disposal Government funds and full power of action. I must also state there were a number of doctors, engineers, and competent, useful men in these commissions who were adapted for this office of devotion.

"These commissions made every effort to promote the public health. They earnestly endeavored to free the towns and villages of all infectious matter, to establish hospitals and ambulances, regulate burials, inspect market-places, isolate those persons infected with cholera symptoms, and to destroy by fire those houses in which this disease prevailed.

"The cholera penetrated as far as Luxor, one day's journey below the first cataract on the Nile; more than sixty thousand of the inhabitants were made victims to this disease. For the purpose of examining the nature, origin, and method of medical treatment, the French and German Governments sent to Egypt medical commissions composed of eminent savants. The Russian and Turkish Governments sent delegates here for the same purpose; and the English Government was likewise represented by twelve medical men and twenty Indian nurses. These, however, arrived in Egypt too late to be of any service, and were of great expense to the Egyptian Government.

"As official delegate from England, Surgeon-General Hunter was likewise sent to Egypt during the prevalence of the cholera, and remained there for three or four weeks. In his official report to the English Government, he declared in a positive and peremptory manner that the cholera in this country was not introduced last year from India, but, on the contrary, had become a disease of an endemic nature; and as he could not deny the existence here of Asiatic cholera, he endeavored to prove that its germs had remained in Egypt, in a concealed state, ever since 1865, and that in 1883, the hygienic condition of this country being very bad, its germs had taken on a very unusual degree of intensity.

"These opinions of Surgeon-General Hunter, who is an expert and well-versed in his profession, are not shared by any medical practitioner here, much less by the commissions and scientific delegates of the European governments, who have expressed themselves frankly and clearly with regard to the character and the introduction of the cholera from India into Egypt last year.

"The English army of occupation, in Egypt, withdrew from towns where the cholera made its appearance and retired into adjoining deserts where the quarantine was enforced. By this means, exposure to the disease was in a great measure avoided. From a total number of seven thousand British soldiers stationed in this country, only one hundred and forty-six succumbed under this calamity.

"Until very recently a few sporadic cases were still reported in Alexandria; but everywhere minds have now recovered their settled state and calmness. And the careful thought of the government has been occupied in the reconstruction of the sanitary board, which during the disease, and even previous to its outbreak, manifested a very great incompetency. The public voice in Egypt has given expression to a sincere wish for the change and radical reform of the sanitary service. The first person who officially proposed a change of the sanitary board, was Surgeon-General Hunter, and afterwards the English Government.

"Mr. Clifford Lloyd recently appointed Under-Secretary of State for the Interior, and previously Inspector of Reforms in the Ministry of the Interior, elaborated a plan for reform of the Sanitary Service. By khedivial decree, an International Commission composed of foreigners and natives, has been appointed to consider this project, in compliance with which the Board of Health has been set aside, and in its place a Director of Sanitary Police appointed in the Ministry of the Interior, dependent in all matters upon the Minister, and having for assistance a Medical Council, which enjoyed the sole privilege to meet for consultation.

"By these means the Sanitary Service will be better looked after and conducted, in all that regards the public health of this country. Moreover, the Maritime and Quarantine Council of Alexandria, will remain permanently in existence as an International Sanitary Commission, and with the provision that its Director should be a European, and not a native doctor."

The New York Polyclinic.—The Quarterly Circular Announcement of this school states that for the first four months of the present session one hundred and seven practitioners were studying in its special classes, while for the first fifteen months of its existence the classes have numbered over two hundred and sixty. The managers, encouraged by the success of the school, have purchased a large property, which they announce they will immediately convert into a thoroughly equipped clinical school and hospital. The Faculty hold seventy positions in the various hospitals and dispensaries of New York, and have in working order a clinical organization so large and complete that the supply of cases for study and demonstration they believe to be equal to every want.

The German Cholera Commission.—The Minister of the Interior, of Germany, has just received the fifth report of the Commission sent out by the Imperial Board of Health, first to Egypt, and then to India, to inquire into the causes and cure of cholera. The report establishes the fact that there is a close connection between the disease and certain bacilli of a specific character which were found with the aid of the microscope in the bodies of cholera patients.

Sanitary Convention in Michigan.—A Sanitary Convention will be held in Hillsdale, Michigan, on Thursday and Friday, April 17 and 18, 1884, under the auspices of the State Board of Health.

The Galligo Prize.—La Societa Medico-Fisica, of Florence, has recently awarded the first triennial Galligo prize to Drs. A. Bianchi and C. Balocchi for their essay on "Regressive Spinal Paralysis of Infancy."

The British Medical Association; Meeting at Belfast. — The fifty-second annual meeting of the British Medical Association will be held on July 29, 30,

and 31, and August 1, 1884, at Belfast, under the presidency of James Cuming, M.A., M.D., F.K.Q.C.P.I., Professor of Medicine, Queen's College, Belfast. The Address in Medicine will be delivered by Sir Andrew Clark, Bart., M.D., F.R.C.P., Physician and Lecturer on Clinical Medicine, London Hospital. The Address in Obstetric Medicine will be delivered by George H. Kidd, M.D., F.R.C.S.I., Master of the Coombe Lying-in Hospital, Dublin. The Address in Physiology will be delivered by Peter Redfern, M.D., F.R.C.S.E., Professor of Anatomy and Physiology, Queen's College, Belfast.

Communications in reference to the meeting of the British Medical Association at Belfast, should be addressed to the Hon. Local Secretaries, John Moore, M.D.; Alexander Dempsey, M.D.; John W. Byers. M.A., M.D.

Visitors going from America to attend this meeting can travel by any of the following routes:

1. A "Cunard" steamer will leave (*a*) New York on Wednesday, July 16, arriving in Queenstown about the following Thursday week, July 24. (*b*) Boston on Saturday, July 19, reaching Queenstown the following Monday week, July 28.

2. A "White Star" steamer will leave New York on Saturday, July 12, and on Saturday, July 19; due at Queenstown about July 20 and July 27.

3. An "Inman" steamer will leave New York on Tuesday, July 15; due at Queenstown about July 23.

4. An "Allan" steamer will leave Quebec on Saturday, July 19, arriving in Londonderry about the 26th or 28th of July.

5. An "Anchor" steamer will leave New York on Saturday, July 19; due at Londonderry on July 29.

Londonderry is ninety-five miles from Belfast, and trains run daily between the two places.

The route from Queenstown to Belfast is from Queenstown to Cork, Cork to Dublin (one hundred and sixty-five miles by train), and Dublin to Belfast (one hundred and thirteen miles).

MEETING OF THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.—The time of the meeting of the British Medical Association at Belfast has been fixed so as not to interfere with the International Medical Congress, which is to begin at Copenhagen on the 10th of August.

A steamer will leave Hull (England) on August 2 and 9 for Copenhagen; and on August 5 a steamer will leave Leith (Scotland) for Copenhagen. Both these places (Hull and Leith) can be reached on any day by leaving Belfast on the previous evening by the cross-channel steamers. Visitors, after attending the meeting of the British Medical Association in Belfast, will have ample time to travel to Copenhagen for the Congress.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending February 16, 1884, indicate that erysipelas, remittent fever, scarlet fever, and inflammation of the bowels have increased, and that diarrhœa, pneumonia, influenza, and typhoid fever have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending February 16th, and since, at eleven places, measles at ten places, and smallpox in Bath township.

OBITUARY RECORD.—DR. GEORGE ENGELMANN, of St. Louis, died of pneumonia on February 4, in the seventy-sixth year of his age. He was born in Frankfort-on-the-Main in 1809, and came to the United States in 1832, after having received his education at the Berlin, Heidelberg, and Würzburg Universities. He went to St. Louis immediately upon his arrival in this country, and there began the practice of medicine and the study of the natural sciences. He was one of the founders of the Western Academy of Science in 1836, and later, one of the originators of the St. Louis Medical Society. In 1856 he was largely instrumental in founding the St. Louis Academy of Science, and was, for many years, president of that body.

Dr. Engelmann won an enviable reputation throughout the United States and Europe, of being one of the finest botanists in America. For forty-seven years he made it a part of his occupation to take meteorological observations several times a day, and only discontinued this practice two days before his death. He was the oldest practitioner in St. Louis. His only child is Dr. George J. Engelmann, of St. Louis.

—— Died at Edinburgh, on February 11th, DR. JOHN HUTTON BALFOUR, Emeritus Professor of Medicine and Botany in the University of Edinburgh, Regius Keeper of the Royal Botanic Garden, and Queen's Botanist for Scotland. He was born in 1808. He was a member of many learned societies both at home and abroad, and was the author of a variety of books and articles on botany, including the *Manual of Botany* and *Botany and Religion*.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 19 TO FEBRUARY 25, 1884.

BROWN, JOSEPH B., *Lieutenant-Colonel*, and BILLINGS, JOHN S., *Major and Surgeon*.—Directed to attend the International Health Exhibition in London, and, as delegates, the International Medical Congress at Copenhagen, to be held in May and August next, respectively; also to include Berlin in their route to or from Copenhagen, and to be governed by special instructions from the Surgeon-General in complying with this order.—*S. O. 44, Par. 8, A. G. O.*, February 21, 1884.

WOODWARD, JOSEPH J., *Major and Surgeon*.—Leave of absence still further extended six months, on account of sickness.—*S. O., 44, Par. 11, A. G. O.*, February 21, 1884.

HORTON, S. M., *Major and Surgeon*.—Having reported at these Headquarters from leave of absence, ordered to Fort Hays, Kansas, for duty.—*S. O. 40, Par. 2, Headquarters Department of Missouri, Fort Leavenworth, Kansas*, February 20, 1884.

PATZKI, JULIUS H., *Captain and Assistant Surgeon*.—Leave of absence extended one year, on surgeon's certificate of disability, with permission to go beyond the sea.—*S. O. 43, Par. 9, A. G. O.*, February 20, 1884.

MADDOX, T. J. C., *First Lieutenant and Assistant Surgeon*.—Assigned to temporary duty at Meyer's Springs, Texas.—*Per Post Orders No. 27, Par. 1, Fort Clark, Texas*, February 13, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIV. SATURDAY, MARCH 8, 1884. NO. 10.

ORIGINAL LECTURES.

A COURSE OF LECTURES ON DERMATOLOGY.

Delivered at the University of Pennsylvania during the Session of 1883–1884.

BY LOUIS A. DUHRING, M.D.,

PROFESSOR OF DERMATOLOGY IN THE UNIVERSITY.

(Reported by Henry Wile, M.D.)

LECTURE II.

ECZEMA.

ECZEMA, popularly known as *tetter*, may be defined as an acute or chronic inflammatory, non-contagious disease of the skin, characterized at its commencement by erythema, papules, vesicles, or pustules, or a combination of these lesions, accompanied by more or less infiltration and itching, terminating either in discharge with the formation of crusts, or in desquamation. The disease shows itself in such a variety of lesions as to render the construction of a proper definition a difficult matter; the definition presented above, however, embraces the essential and characteristic lesions. The lesions may be divided into primary and secondary; among the former, erythema, vesicle, papule, and pustule, or a combination of these, may be mentioned; among the latter, crust, fissure, and scale. The disease is a protean one. The subjective symptoms are burning or itching. The course of the disease may be either acute or chronic. It is more liable to relapses than any other disease of the skin, and these may occur in any variety, and to any extent.

There are four principal varieties: eczema erythematosum, eczema vesiculosum, eczema papulosum, and eczema pustulosum.

Eczema erythematosum is a distinct inflammation of the skin, characterized by an erythematous inflammatory surface, with more or less infiltration, swelling, and itching, terminating in desquamation. In this country it is a common variety of the disease, not, as a rule, acute, but having a tendency to become chronic. It remains, generally, the same from beginning to end, and does not incline to run into other varieties. Slight moisture may, at times, be present, but the lesion, as a rule, remains dry.

Eczema vesiculosum appears in the form of pin-point to pin-head sized vesicles, usually on a red base. There is no grouping, but the vesicles tend to form variously sized patches. They appear often in successive crops, forming quickly, becoming distended with a yellowish, clear fluid, and rupturing in from twelve to forty-eight hours. The development is sometimes so fast that one is scarcely able to note the disease in the vesicular stage.

Eczema papulosum is characterized by the formation of pin-head to small split-pea sized papules, discrete, confluent, or in patches, accompanied by itching or burning. The subjective symptom of itching is usually so violent that the lesions soon become scratched and excoriated.

Eczema pustulosum exists in the form of well- or ill-defined minute or small pustules, similar in their general features to the vesicles just described. It occurs most frequently in infants, children, and young persons. The common sites are the face and scalp.

There are several important sub-varieties, the chief one being *eczema rubrum*, characterized by the multiformity of the lesions, some being primary, others secondary. This form is usually the further development of one of the foregoing varieties, and presents a typical clinical picture, consisting of thickening and infiltration, with more or less redness of the surface, oozing, crusting, and scaling. The discharge soon forms into crusts, which adhere closely and often obscure the lesions. Clinically, it is a common form of the disease, lasting usually months or years, getting better and worse from time to time. *Eczema madidans*, or weeping eczema, is seen in connection with eczema vesiculosum and eczema rubrum, and is characterized by an oozing, weeping, or discharging surface.

Eczema squamosum, or scaly eczema, is also common, and is generally chronic, lasting months. The scaling, as a rule, is scanty. *Eczema fissum*, or fissured eczema, occurs mostly about the hands and feet, especially the joints. *Eczema verrucosum* is so called from the papillary or warty condition of the lesions, and generally exists as a patch.

Eczema is also divided, respecting the pathological changes and the duration of the disease, into *acute* and *chronic*. The acute form occurs especially in children, and sometimes without treatment runs its course, ending in recovery in a few weeks. The disease, however, as a rule, inclines to become chronic. The distinction between the acute and chronic forms is based rather upon the character of the pathological changes that take place than upon the duration of the attack. In the latter form the inflammation is often of a subacute type, and is accompanied by marked secondary changes.

Eczema is everywhere the commonest disease of the skin. It constitutes about forty per cent. of all skin diseases in Philadelphia. In Boston, of 5000 cases collected by White, 2242 were cases of eczema. In New York, of 8000 cases collected by Bulkley, thirty-three per cent. were cases of eczema; and in the statistics of the American Dermatological Association, there were 6179 cases out of 16,863. The disease is found in every sphere of society, among the poor and the rich; at all periods of life from infancy to old age. It is at times hereditary, and is more common in light-haired than in dark-haired subjects. In some individuals there exists an inherent peculiarity of the constitution which predisposes to eczema. Where this tendency exists, the disease is liable to be provoked by various constitutional disturbances, such as disorders of the digestive tract, chlorosis, deficient excretion, gout, pregnancy,

nervous exhaustion, and excessive mental strain. Among the local causes, cutaneous irritants, as mercury, sulphur, croton oil, tincture of arnica, dyestuffs, poison ivy, heat, friction, perspiration, alkalies, acids, soaps, and parasites may be mentioned.

It is a marked inflammatory disease, and in the acute form the changes are generally so rapid as to render their study difficult. In the chronic form there exists a chronic inflammation which it is difficult to distinguish from that found in dermatitis. The principal seat of change is in the rete and in the papillary layer of the corium. In the papular and vesicular varieties there exist respectively a circumscribed plastic infiltration and a serous exudation in and about the papillæ, the former giving rise to papules and the latter to vesicles.

The diagnostic points are, first, infiltration, swelling, and thickening of the skin; second, exudation, which is fluid in the case of a vesicle or pustule, and plastic in the case of a papule; and third, itching, which in the vast majority of cases is a distressing symptom. Eczema may be confounded with many diseases, according to the variety which is present. In the erythematous and vesicular varieties, it may be mistaken for scarlatina, especially when the eruption has appeared universally and rapidly in one or two days; also, with erysipelas, when the eruption has appeared rapidly on the face. But in regard to both of these diseases, the presence or absence of constitutional symptoms would aid in making a diagnosis. It may be also mistaken for erythema simplex, but in this affection there is absence of itching, swelling, and œdema; also, herpes, but here the lesions are always grouped, and seldom rupture, while in eczema the vesicles burst and give rise to the formation of crusts. It may easily be mistaken for tinea favosa of the scalp; where this disease has existed for some time, pustules may form, and the picture may closely simulate chronic pustular eczema. But a microscopic examination of the crusts would render a decision. The vesicular, papular, and pustular varieties may, moreover, be confounded with scabies. This, however, is a progressive disease, growing rapidly worse from week to week, and besides, it appears at first localized between the fingers, and about the genitalia and buttocks. The presence of the burrow in scabies is, of course, a positive diagnostic point. Eczema must be distinguished from artificial inflammations, as produced by various irritants, as, for example, croton oil, mercury, arnica, turpentine, etc. In these cases the history, the form of the lesions, and the course of the disease suffice to establish the diagnosis. The diagnosis between eczema and syphilis is not, as a rule, difficult. The vesicular lesion is practically not met with in the latter, while the papular lesions are attended with less inflammation than in eczema. The pustular variety of eczema is more superficial, and the removal of the crusts does not reveal an ulcerated surface, as in syphilis, but merely an excoriation. In pemphigus vulgaris the lesions are much larger than in eczema, and occur isolated; while pemphigus foliaceus, which resembles eczema, has a peculiar history and course of development. Pemphigus, moreover, in this country is exceedingly rare.

Eczema may be mistaken for seborrhœa, especially of the face; but it must be borne in mind that seborrhœa is a sluggish affection, accompanied with hyperæmia, and not with typical inflammation. The diagnosis between eczema and psoriasis is not always easy, especially where the latter disease is not marked, and the scales are wanting. However, the history and the course of the diseases are different, psoriasis being more steady, eczema more variable. The lesions in the former are sharply circumscribed, ending abruptly; while those of the latter generally fade away into the surrounding tissue.

Ringworm, occurring about the genitalia—especially the thighs—and extending up on to the abdomen, may, at times, closely resemble eczema; but in ringworm the lesions are sharply defined, and their borders are more or less marginate. In ringworm of the scalp, short, broken-off hairs may always be found, which, examined microscopically, show the fungus.

In sycosis, as distinguished from pustular eczema, the pustules will be found to spring from the follicles, and to be perforated by the hairs.

Eczema is a curable disease. The measures employed are both constitutional and local. In some cases constitutional treatment only avails. In acute cases, say of one to three weeks' standing, excellent results follow the use of saline aperients, as magnesia, sulphate of magnesium, bitartrate of potassium, sulphate of sodium, and Rochelle salt. For children, rhubarb may be specially recommended. Diuretics are also sometimes indicated, such as the acetate of potassium, the carbonate of potassium, and liquor potassæ. Alkaline mineral waters, as Carlsbad, are also useful. Tonics, as iron, quinine and arsenic, and cod-liver oil, are also valuable. A few words as to arsenic, our most valuable remedy. It should be given with discretion; and much better results are to be obtained by the exhibition of small rather than of large doses. In the majority of cases, the best results will accrue from the use of not more than two-minim doses of Fowler's solution. The use of the remedy must be kept up for some time. In a case of chronic universal eczema, occurring in a boy eight years old (one of the most obstinate cases that ever came under our notice in the University Hospital), local measures were of no avail, and the agent that effected a cure was arsenic. In certain forms of the disease, however, as in chronic eczema of the leg, where there is thickening, it is not to be relied on; but in the chronic papular variety, and in some forms of erythematous eczema, occurring in broken-down, debilitated subjects, where the nervous system is at fault, arsenic may be used with great advantage. It is indicated, as a rule, only in chronic, never, or rarely, in acute cases.

Local treatment is important and is always demanded. The variety of the disease should be taken into consideration, also the amount of surface involved, the region, duration, and the history. In the erythematous variety, usually met with about the face, much benefit may be derived from the use of lotions of carbolic and boracic acids; the former is of particular value, and may be thus used:

℞.—Acidi carbolici, ... ℥ss.
Glycerinæ, ... gtt. xv.
Alcoholis, ... f℥j.
Aquæ, ... f℥iv.—M.
Sig.—Lotion. Apply several times a day.

The following lotion of prepared calamine and oxide of zinc is also recommended.

℞.—Calaminæ præparatæ, . . . ℥ss.
Zinci oxidi, ... ℥ss.
Glycerinæ, ... f℥ss.
Aquæ calcis, ... f℥iv.—M.
Sig.—Shake before using. Apply as a lotion three or four times a day.

Or the compound sulphide of zinc lotion, made as follows:

℞.—Zinci sulphatis,
Potassii sulphureti, . . . āā ℥ss.
Aquæ rosæ, ... f℥iv. —M.
Sig.—Apply twice a day, for ten minutes each time.

In the vesicular variety, in the acute stage, excellent results will often follow the use of black wash followed immediately by oxide of zinc ointment. Oxide of zinc ointment is a valuable, mildly stimulating, drying ointment, and is useful alone and also in combination with other remedies. Of the various dusting powders, the following is one of the best:

℞.—Talci veneti, ... ℥iv.
Zinci oxidi, ... ℥j.
Amyli, ... ℥iij.—M.
Sig.—Dusting powder. Apply freely.

Salicylic acid, ten or fifteen grains to the ounce of lard, and oleate of zinc, one drachm to the ounce, do well in some cases. The calamine lotion above referred to is also valuable in the vesicular variety.

Papular eczema, as a rule, requires strong lotions. Among the best is one of carbolic acid, as follows:

℞.—Acidi carbolici, ... ℥iss to ℥iij.
Aquæ, ... Oj.—M.
Sig.—Use as lotion several times a day.

Thymol, one to three grains to the ounce of water may also be mentioned; and liquor picis alkalinus, the formula for the latter being as follows:

℞.—Picis liquidæ, ... f℥ij.
Potassæ causticæ . . . f℥j.
Aquæ, ... f℥v.—M.

This is to be used diluted with water in the strength of one drachm to two or four ounces of water. The liquor carbonis detergens, or alcoholic solution of coal-tar, will be found serviceable.

Strong sulphur ointments are also sometimes very valuable.

In the pustular variety, ointments of calomel, white precipitate, and sulphur, from one scruple to one drachm to the ounce of lard, may be recommended. In the squamous variety, tar is the most valuable remedy, and may be used in the form of the oil of cade, one or two drachms to the ounce of lard, or in the form of the officinal tar ointment, or as the liquor picis alkalinus, mentioned above. Ammoniated mercury, fifteen to forty grains to the ounce, may also be mentioned as serviceable. Where large surfaces are involved, a remedy like tar should first be tried on a small patch, to determine whether it will agree.

In eczema rubrum of the leg, the rubber bandage may frequently be used with benefit. In concluding the subject of treatment, it may be added that there is no one remedy which can be positively relied upon to effect a cure in a given case, especially where the lesions are extensive.

ORIGINAL ARTICLES.

THE EXTERNAL THERAPEUTICS OF PULMONARY CONSUMPTION.

By THOMAS J. MAYS, M.D.,
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There can be no question that the beginning, the course, and the duration of pulmonary consumption are entirely limited and modified by the amount of resistance which the bodily forces are able to bring to bear in opposition to its progress. This statement is well sustained by the general well-known facts that the well-fed, the well-clothed, the well-housed, the well-developed, and the strong, possess a constant immunity from the disease; while the weak, the delicate, and the poorly nourished are constantly menaced by it, and easily fall a prey to its ravages—showing that it is a struggle between the forces inherent in the organism and those which play upon it, and that the outcome is a victory for the stronger.

Without entering here into a minute discussion of the pathology of pulmonary phthisis, or whether the immortal bacilli of Koch are a cause or a product of the disease, it may yet be safely said that both the pneumonic and tubercular forms of consumption are maladies in which the principal and most conspicuous destructive rôle is played by inflammation, either as a cause or effect. But it must not be forgotten that, while the lungs are the organs in which the most active manifestation of the disease takes place, there is no evidence to show that it is exclusively confined to these organs, and that the rest of the body does not bear a proportionate share of the disintegrating process; but, on the contrary, there is every reason to believe that the disease is constitutional as well as local; for no amount of argument can convince him who has had any thoughtful experience with the disease, that the extreme general debility, the prostration and depression of the nervous and muscular systems, the easily disturbed circulation, the shortness of breath, the clubbed finger-ends, and the hæmophilia, can be accounted for by the presence of a slight apex infiltration, or even by a partial destruction of lung-tissue—since it is too well known that there are scores of individuals who, with large portions of their pulmonary tissue excavated by previous disease, are to all intents and purposes well, and are able to perform a day's labor tolerably without much difficulty.

If, then, pulmonary consumption is a local as well as a general disease, and if its course and duration are related in inverse proportion to the amount of resistance which the bodily forces can offer to its progress, then our therapeutic line of duty lies plainly in the direction of enhancing and strengthening the forces of the body by local and constitutional means to a degree sufficient to counteract the process of disease.

In this paper I have limited myself to a discussion of the external therapeutics of pulmonary consump-

tion; not because I believe that internal medication alone in this disease is of very little permanent benefit, but because I believe that this form of treatment has never received the encouragement which it deserves, and because I think I can demonstrate by palpable evidence that its practical results are superior to any other mode of treatment yet brought before the profession. The agents which are employed are those generally known as "counter-irritants" and "massage."

I do not think that the wisdom of any person will ever be questioned if, before he undertakes to perform any kind of work, he previously endeavors to ascertain accurate knowledge of his instruments and of their actions, as well as of the material on which he expects to operate. So it is in therapeutics, if we hope to accomplish anything. We must first find out the general action of the agents which we wish to employ, as well as the general tendency of the disease which we expect to alleviate, and then, if possible, adapt the former to the latter in such a way as to obtain the desired results. I am not unmindful, however, that theorizing, especially in medicine, is under grave suspicion in some quarters, and I shall, therefore, ask permission to indulge in a discussion of the *modus operandi* of the two agents which form the basis of treatment in this paper, in the firm belief that without sound theoretical guidance our practice is blind.

The term "counter-irritant," as I have said elsewhere, is applied to various therapeutic substances, such as antimony, croton oil, cantharides, ammonia, iodine, turpentine, friction, hot poultices, etc., and is evidently out of place, for irritation is not one of their common products; and when an irritant effect is produced by them, it should never, as a rule, be transmitted to the seat of disease. It is the impulse of stimulation which they call forth, and not that of irritation, which is communicated to the cells of the body, and which invigorates and enhances their functions.

The *modus operandi* of these substances is currently believed to consist in causing accelerated action on the surface of the body, producing redness, and thus inviting the supposed superabundant blood away from the diseased organ over which they are applied. The validity of this depletory view of their action may well be questioned on the strength of various well-founded reasons, for the happy effects which we often obtain from the treatment of neuralgia by blistering, for example, cannot possibly be due to the depletion which is believed to be occasioned by the latter, for the nervous structures in nearly all cases of neuralgia are already in an anæmic state. Again, take eczema, or some other form of cutaneous inflammation; and where, let me ask, is the medical practitioner who has not witnessed a disappearance of the redness and inflammation, and a healthy color of the skin substituted under the benign influence of a poultice. Here the supposed counter-irritant is brought in direct contact with an inflamed portion of the skin; and if it were true that this agent relieves the disease by simply inviting a larger amount of blood to its immediate vicinity, then it should occur in this instance; but instead of this, the part becomes blanched and pale, and the inflammation disappears. Nor can any one reasonably expect to derive any benefit whatever from the employment of these external remedies in the treatment of pulmonary phthisis on the score of depletion, especially not after the disease has reached its second stage. For caseous masses, no matter whether resulting from the tubercular or inflammatory infiltration, are already in a semi-isolated condition, if not entirely cut off from all vascular communication, and hence disintegrate and die. The pressing indication here is provision for a more copious and abundant blood supply to nourish the famishing and fast-starving tissues, and plainly not for still greater depletion; indeed, the presence and absence of blood supply in the lungs in phthisis are important elements in the history of the disease, and must be taken into consideration in its treatment; for, it is a fact that persons suffering from mitral disease, and whose lungs are therefore in a more or less constant hyperæmic condition, rarely die from phthisis. To this aspect of the treatment I shall revert further on.

A rational inquiry for a principle which underlies the physiological action of these external remedies, will show us that they have at least one general law pervading their action, and that is an increase of molecular and cellular motion. They all conform to this law, and though they act with different intensity, their action yet differs chiefly in degree, and not in kind—in quantity, and not in quality. But it may be said that most all disease, and especially inflammation, is a process of increased molecular activity, and why prescribe an agent which tends to the same end, and thus increase the trouble instead of lessening it? We must recollect, however, that all disease is a process of disintegration, and inclines to diffuse and radiate until met and counteracted by healthy molecular motion, and that these *external stimulants*, as I shall term them in this paper, control disease, not by acting so much upon the disease centre itself, as by influencing and strengthening the more or less healthy tissues which surround the disease.

To make this clear I shall state that all motion, whether massive or molecular, takes place in the line of least resistance, and if the resistance is less on the side of health than it is on that of disease, then diseased motion will spread, *vice versa;* and if there is not sufficient force present in the body to resist and counterbalance the progress of disease, then death must follow. This resisting power varies in different individuals, and in the same individual at different periods, and it is well exemplified in the processes of mortification and gangrene. The line of demarcation, which is the battle-line between morbid and healthy action, may be fixing itself in a certain locality, and the strength of the patient, from some incidental cause, may be suddenly depressed still further, thus diminishing the resistance of the body and allowing the line to settle still closer to the centre of the body. The same conflict between healthy and diseased action is also well seen in chronic ulcers, where the line between health and disease advances and recedes, making the

ulcer appear large at one time and small at another, in direct correspondence with the strength of the patient and of the part; and it is a noted fact that the line of treatment which is pursued by all rational practitioners in these ulcers is that of endeavoring to maintain or enhance the resisting power of the patient by various means, prominent among which are the external stimulants. In threatened invasion of mortification or of gangrene, the early application of a warm poultice will often avert the danger, or at least tend to circumscribe and limit it to a smaller area than if left to its own unrestricted course. In lacerated and contused wounds, such as are usually produced by heavy machinery, there is often a disposition towards coldness, and with but little tendency to react; here the persistent application of a warm poultice will frequently restore the injured parts to a more healthy state.

Now, if the intensity of the inflammatory process were represented by a shaded line, the darkest color or shade would represent the centre of inflammation —the seat of greatest activity; next would be a shaded circle of lighter color; the next circle would be a shade lighter, and so on, until finally the color would fade into the light hue of health. It is evident, therefore, that there are many grades of activity between health and disease; that the former fades imperceptibly into the latter, and the latter imperceptibly into the former; and that there are grades which are neither constantly the one nor the other, but oscillate between the two. So from all the data which have been embodied in this paper thus far, I think it will appear obvious that through the agency of these *external stimulants* we can shift the battle-line between health and disease; or, in other words, that we can through them not only deflect disease and diffuse healthy action into regions which were previously invaded by disease, by enhancing molecular and cellular activity in the surroundings of inflammatory action, but also remove the products of inflammatory action, and so prevent the spread of disease and also eradicate it.

Care must be exercised in the selection of the proper stimulant, for it is a very easy matter to generate more excitement on the surface than is necessary, and thus aggravate rather than benefit the disease. This appertains especially to the different forms of inflammation. As a rule, the more recent the disease, other things equal, the easier it is influenced and its progress checked; hence, the milder external stimulants, such as mustard, turpentine, ammonia, friction, poultices, etc., must be applied; but in the well-settled or chronic form, the most active measures, such as blisters, croton oil, and other agents are indicated.

From a considerable experience in the treatment of chronic lung troubles, I became convinced some time ago that none of the external stimulants then in current use were sufficiently powerful to modify or ameliorate the more chronic and persistent hereditary forms of pulmonary phthisis, and I have designed a rubber apparatus[1] for the chest in the shape of a double jacket, into which steam is forced through rubber tubing from a boiler on a neighboring stove. I partly failed in my object then, because the rubber yielded too readily to the disintegrating effects of steam; but the clinical results which I obtained from its limited use satisfied me that further efforts in seeking suitable material for the construction of such an apparatus would be well worth a trial. So I had lately made, by Messrs. Tiemann & Co., of New York, a steam-jacket of tin metal, which, from a somewhat protracted use, seems to fulfil all the ends I had originally in view. The inside surface of the jacket is covered by a lining, an inch in thickness, composed of cotton wadding, covered with several thicknesses of flannel. This lining is moistened with water and heated before the jacket is adjusted to the chest. Thus arranged, it will be observed that it strictly fills all the requirements of a strong and powerful external stimulant, and, while its action is the same in kind to that of a hot flaxseed poultice, only a great deal stronger, it possesses many prominent advantages over ordinary poultices and other appliances previously employed. It envelops the whole chest completely. It is light and readily adjusted. It retains its position on the chest without difficulty. It is easily managed and operated. It maintains a constant and uniform temperature. It requires no renewal every hour.

The patients are allowed to remain in the steam-jacket for a varying period, from two to five hours each day. The steaming, besides causing an intense thirst, also calls forth a copious perspiration, and, as a precautionary measure against a too sudden change in the bodily temperature, the patients are advised to dress dry and go to bed, cover up well immediately after the jacket is taken off, and to remain there until sufficiently cooled off. The thirst is so great that a patient frequently drinks from two to three quarts of milk, or of milk and water, during three hours' steaming. Whether the moisture which is applied externally to the body under such a high temperature is absorbed by the circulation, is rendered probable by physiological experiment; but it is certain that the large amount of liquid which patients take by the mouth cannot fail to promote molecular and cellular metamorphosis in the tissues of the lungs, surrounding the centres of disease, under the intense stimulation which is superinduced by the steam-jacket.

Last winter, I witnessed a series of very interesting experiments on the physiological effects of massage, which were made by Dr. Zabludowski, under the direction of my friend and teacher, Prof. Kronecker, in the Physiological Laboratory of the Berlin University, where I was engaged in physiological work at the same time. The results of his experiments, which were since published in the *Centralblatt für die medizinischen Wissenschaften*, No. 14, convinced me that massage had a tonic and invigorating influence upon the animal body; and during my attendance, last spring, at the Brompton Hospital for Consumption, in London, I related the result of those experiments to Dr. Bruce, of the hospital staff, and he concurred with me in the belief that bodily massage, by arousing the consti-

[1] See New York Medical Journal, October, 1879.

tutional lethargy present in phthisis, might probably be a valuable adjunct in its treatment. Since my return, I have had opportunities to test the efficacy of massage in a clinical way, and, while it is inferior in its beneficial effects to the steam-jacket, it has certainly proved itself to be a most useful addition to the external therapeutics of pulmonary consumption.

The following is a condensed record of the cases which have been treated by this form of external stimulation and massage. Although most of the cases have been under daily observation, and a careful record of the temperature, symptoms, and physical signs was kept in all cases but one, in which it was impossible to obtain accurate temperature observation, on account of the unlettered condition of the patient and his family, I shall only relate the most salient points in their history and progress. Case I. was treated by the rubber jacket alone. Case II. was first treated with poultices, etc., and finally by the rubber jacket. Case III. by poultices alone. Cases IV., V., and VI. by poultices and massage. Cases VII. and VIII. by poultices and massage for a while unsuccessfully, and then with tin steam-jacket alone. Case IX. by steam-jacket alone. It is but fair to state that, while the external treatment was in progress, nearly all the patients took cod-liver oil, and all of them meat-juice, milk, and the most nutritious diet they could afford. Tubercle bacilli were found in Cases IV., V., VI., VII., and IX.

CASE I.—D., aged eighteen years, became my patient on May 6, 1879. Coughed since previous August; had a copious expectoration, first green, then streaked with blood; had hæmoptysis two months before; also subject to chills and night-sweats; lost in flesh; appetite poor; bowels and menses regular; and had clubbed finger-ends. No trace of hereditary disease in family history.

Physical Signs.—Diminished resonance over whole of left lung; crepitation at apex, and rough respiratory sound towards the base. Right side normal.

Treatment.—Applied the original rubber steam-jacket on May 8, and she used it almost daily until June 17. Under its action she improved in cough, expectoration, chills, night-sweats, appetite, etc., and on the day the steaming was discontinued the physical examination showed that the diminished resonance and crepitation had vanished, and were replaced by a rather harsh vesicular murmur. When last heard from, about a year ago, she was doing well. This case, in the rapid amelioration of the physical signs, is analogous to Case IV.

CASE II.—S., married, aged forty-five, came under my care, March, 1879, in the following condition: Sleeps poorly, coughs constantly, expectorates profusely, color of which is yellowish-gray; has night-sweats, chills, poor appetite, coated tongue; bowels irregular, and is losing flesh. One brother died of consumption; rest of his family exempt from phthisis.

Physical Signs.—Left side: dulness, crepitation and bronchial respiration in upper two-thirds, crepitation specially audible in middle third behind. Right side normal.

Treatment.—Until May 21, 1879, he was treated with poultices, cod-liver oil, etc., with little or no success, and from this time on to June 25 he used the rubber steam-jacket. Under this form of stimulation his cough, expectoration, chills, and night-sweats, gradually diminished, his appetite and sleep returned, and on June 26 the steaming was discontinued, and a physical examination showed that the dulness and crepitation were replaced by a somewhat harsh vesicular murmur in the upper third of left lung, and a cavity of the size of an egg in the middle third behind. At present writing (February 4, 1884), the cavity is somewhat shrunken, and he still has a cough, but is strong and fleshy, and well able to work every day.

CASE III.—K., aged nineteen, single, I first saw November 24, 1880. Coughed for a month, had yellow expectoration streaked with blood, stitches in left apex, night-sweats, lost flesh, poor appetite, vomited his food, and had clubbed finger-ends. Lost a brother the previous year, probably with phthisis.

Physical Signs.—Left side: diminished resonance, crepitation and wavy respiration from apex to third rib. Puerile respiration over remainder of lung. Right side normal.

Treatment.—Flaxseed poultices over left shoulder, meat-juice, cod-liver oil, and nourishing food as well as some hypophosphite of lime.

January 10.—Feels good, and physical signs as well as symptoms markedly improved; poultices discontinued. He then moved out of my field, but from last accounts (October 13, 1883), he was well and got married some time before.

CASE IV.—D., single, aged twenty, I began to treat July 19, 1883. She had a cough for a year, chills, lost flesh, poor appetite, and sleeplessness, never expectorated blood. Weight 100½ pounds. Her father's mother and sister, and her mother's sister died of consumption. She lost a brother at the age of eighteen from some form of lung trouble.

Physical Signs.—Dulness over left apex, chiefly over its posterior aspect, and crepitation over same region. Right side normal.

Treatment.—Flaxseed poultices over upper portion of left lung, and massage of the whole body twice a day.

September 7.—Dulness over left apex almost entirely gone, no crepitation anywhere, and is replaced by a weak, but otherwise normal, respiratory sound. Her symptoms are also very much improved. She weighs 109 pounds. Discontinued poultices and substituted iodine ointment. When last heard from (last December), she was doing well.

CASE V.—P., aged four and a half years, came in my hands in the beginning of last July, when he was suffering from catarrhal-pneumonic phthisis of the left lung. Cavity-formation was then going on in apex, cavernous râles in middle, and complete dulness and absence of respiratory sound in lower third of left lung, anteriorly, posteriorly, and laterally. Right lung normal, except hyper-resonant. Tubercle bacilli were found in large numbers. Weight of patient, 30½ pounds. A brother of the boy's father died from phthisis about ten years before.

Treatment.—Flaxseed poultices and two bodily massages every day.

July 19.—Same treatment. Mucous râles found on right side posteriorly, extending from apex along spine to base. Left side about the same as at last examination, although the patient seemed better in some respects.

August 8.—He suddenly spat up about half a pint of yellow, purulent fluid, which evidently came from an abscess in left lung, towards its base, where the absolute dulness existed, for a physical examination disclosed an extension of the cavity. Mucous or moist râles persist at base of right lung; none any longer at apex.

18th.—Same treatment. Moist râles at base gone.

24th.—Very few tubercle bacilli found in sputum. Discontinued poultices and massage, and applied iodine ointment to chest.

Physical Signs (26th).—Left side, cavity extending from first to sixth rib, anteriorly, and posteriorly to angle of scapula. Considerable retraction at apex. Very few moist râles at base; otherwise, respiratory sound is restored, though diminished in force. Right side normal, except hyper-resonant. Weight, 35 pounds. December 13, doing well. Weight, 40 pounds. At present doing well.

CASE VI.—August 4, 1883. G., married three years; aged twenty-eight years, and mother of two children. Has had a cough since she had measles, when three years old; cough aggravated since she married, and she became very much worse after both her confinements. Had copious hæmoptysis last March, losing about one quart of blood, and has lost flesh rapidly ever since. Present weight, 102½ pounds; a week ago, she weighed half a pound more. No family history of consumption on either her father or her mother's side. Her brothers and sisters are all well.

Physical Signs. — Right side depressed and sunken from clavicle to mammary region; tympanitic sound over this region; cavernous râles at base. Left side resonant on percussion over the whole extent; coarse mucous râles posteriorly at base and interscapular region.

Treatment.—Flaxseed poultices over whole chest, massage twice a day, cod-liver oil and meat-juice. After a week's treatment she began to mend, and on September 27 the poultices and massage were discontinued. She was very much improved in every respect, and presented the following physical signs: Right side: small cavity at base anteriorly, no râles anywhere. Left side: few bronchial râles at base, and cavity in interscapular region. She sleeps well, coughs very little, her expectoration now is mucous instead of greenish-gray; has good appetite, and weighs 111½ pounds.

December 7.—Still doing well; her cough persists in a mild form, and she weighs 114 pounds.

30th.—Is able to do her own housework.

CASE VII.—I began to attend B., aged thirty, married, on September 30, 1883. Has been ill since last June, when he was taken with a severe chill. Coughs a great deal; has a green expectoration, night-sweats, loses flesh, poor appetite, irregular bowels, clubbed finger-ends; frequently spits blood, and to-day he had a very profuse hemorrhage from his lungs—probably lost over one pint of blood. Lost one brother from consumption.

Physical Signs.—Left side: Tympanitic sound over apex, extending to angle of scapula behind, and in front to third rib, with slight dulness extending for a few inches below these points; cavernous sounds from apex to third rib in front, and to angle of scapula behind, with some moist and crepitant sounds below this; base normal. Right side: Respiratory sounds normal, except prolongation of expiratory sound at apex. Weight, 133 pounds. Tubercle bacilli abundant.

Treatment.—Flaxseed poultices over whole chest, and massage twice a day; meat-juice, milk, cod-liver oil, and a nutritious diet. He began to improve, not only in his symptoms, but the physical signs also mended considerably.

On October 21st there were very few moist râles audible anywhere in his whole chest; but on October 22d another examination showed that tubular breathing and moist râles were developing themselves in lower half of left lung behind. On October 24th ceased to poultice, and applied croton-oil liniment over whole chest and continued massage. I now made arrangements with Messrs. Tiemann & Co. to construct a tin-metal steam-jacket for him. On account of several unavoidable delays in the manufacture of the jacket, I did not get it until November 20th, when the disease had also extended to the right apex, and formed a small cavity there. The physical signs at this time were the following. Left side, anterior: Cavity extending to fourth rib, tubular breathing and moist râles from here to base. Posterior: Cavity to angle of scapula; from here to base, tubular breathing and some moist râles. Right side, anterior: Small cavity extending to right intercostal space, below this normal. Posterior: Cavity small in apex; rough breathing at angle of scapula, below this to base some moist, but chiefly normal, sounds. I now omitted the massage, and began the use of the steam-jacket. He began to improve, as was well shown by the amelioration in his symptoms and physical condition. On January 18, 1884, I took off the steam-jacket. He had very little cough and expectoration; no chills nor night-sweats, and presented the following physical signs. Left side, anterior: No moist râles; base clear also laterally. Posterior: No moist sounds except a few clicks over cavity; respiratory sounds normal from cavity to base. Right side: Normal over whole lung except small cavity in apex.

Feb. 1.—Very few tubercle bacilli in sputum. It is unnecessary to point out that the condition of this patient was well-nigh desperate when the steam-jacket was applied, and whether he will fully recover his health (although at present writing he is still improving weighs 136½ pounds) the future alone can determine. The results in this case are certainly very interesting, when we reflect that the whole course of treatment was carried out under the most unfavorable hygienic surroundings—in one room, where most of the cooking, the heating, the eating, and most of the sleeping of a family of seven

members were done; and that during a most rigorous winter. His temperature, which ranged from 100½° in the morning to 103° in the evening, when I first took him in charge, has seldom varied more during the past month than from 98½° in the morning to 99½° in the evening.

CASE VIII.—K., aged forty, married, came under my care August 1, 1883. Received an injury to his left side about seven months before, which resulted in pleuro-pneumonia of the left lung. He coughed a great deal; expectoration dark-green and streaked with blood; never had hæmoptysis; no night-sweats nor chills; very little variation in temperature then; hoarseness and pain over larynx; good appetite; bowels regular, but somewhat inclined to diarrhœa. No trace of consumption in family history. No tubercle bacilli found. Weight, 128¾ pounds.

Physical Signs.—Left side: tympanitic resonance from apex to nipple, and absolute dulness from here to base, also absolute dulness behind and laterally at base. Cavernous sounds from apex to nipple; complete absence of respiratory sounds or râles from here to base; the same absent behind and laterally. Right chest normal.

Treatment.—Flaxseed poultices and massage, cod-liver oil and nutritious diet. He steadily improved under this treatment in all his symptoms and physical signs, until August 29th, when he weighed 135½ pounds. After this the poultice and massage lost their influence over the disease, and there was little or no progress in his case for several weeks, after which he gradually lost ground. The poultice and massage were stopped, and on December 9th the steam-jacket was applied. His weight at this time had sunk to 133½ pounds, and his physical condition was as follows: Left lung about same as at first examination, except large cavity in apex. Right lung, no dulness or impaired resonance anywhere; wavy respiration in upper third anteriorly, and broncho-vesicular respiration at base, posteriorly and laterally. Massage and cod-liver oil were discontinued. From this time he began to improve again in his physical condition, symptoms, and feelings. On December 14th he said that since he is steaming, he feels "quite like another man." On December 26th the physical signs noted are—left side: dulness from cavity to base markedly diminished, and moist râles heard here where there was complete suppression of all sounds before. Right side about the same.

Jan. 4.—The physical signs are about the same as at last examination, except that to the broncho-vesicular respiration at base of right lung are added a few moist and sibilant râles.

12th.—The physical signs were as follows: Left side: moist râles towards base diminishing, and are replaced by more normal respiratory sounds, sunken over upper third. Right side: wavy respiration still present, though improving; moist and sibilant râles have disappeared at base.

Feb. 4th.—The physical signs are: Left: moist râles below cavity less intense and less numerous; respiratory sounds now plainly perceived over whole lung below cavity. Right side: free from all moist and sibilant râles at base; wavy respiration in apex improving. Weight has not been taken since he began steaming.

He is still under treatment.

CASE IX.—Was asked to see W., married, aged forty-six, on January 18, 1884, who was well up to within one year ago, when he was taken with a cough and hæmoptysis. Had another hemorrhage three weeks before I saw him. Has now a constant cough, feels chilly, has night-sweats and sleeplessness, poor appetite, vomits after every meal, bowels regular, clubbed finger-ends. No evidence of consumption in family history. Abundance of tubercle bacilli in sputum.

Physical Signs.—Right side: Impaired percussion resonance anterior to nipple, and posteriorly to about two inches of angle of scapula, crepitation extending over this same region. Left side: Hyper-resonant and normal, though increased respiratory sound.

Treatment.—Steam-jacket and nutritious diet, as well as cod-liver oil.

February 4.—His symptoms are: Sleeps well; coughs and expectorates very little; has no chills or night-sweats; appetite medium; bowels costive; has not vomited since he began steaming, and says his general strength is improving. His physical signs are as follows: Right side: Percussion resonance in upper portion of lung about the same, although there is less marked crepitation in this region—only audible as far as the third rib anteriorly, and to the spine of the scapula posteriorly. Still under treatment.

The result of these cases might have been withheld from the medical public for a year or two longer for the purpose of observing the future development in the last three cases; but when we come to consider that in no single instance where this method of treatment has had a fair trial did it fail in a disease which is notoriously rebellious to treatment; that the complete recovery of the first three cases is placed beyond a doubt by the time which has elapsed since their treatment; and that in the last three cases the improvement and the amelioration in their symptoms and physical signs were just as decided as in the first three, I think I feel justified in their publication.

UPPER LEHIGH, PA., February 4, 1884.

BURQISM, OR METALLOTHERAPY IN THE TREATMENT OF OCULAR AFFECTIONS—HYPERÆSTHESIA OF THE RETINA.

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WE here beg to present the first of a series of cases, all treated by this method, as applicable in eye affections complicated with neurotic symptoms,

local and general. The whole series will include such cases as present themselves in daily practice, and will represent the results obtained in every case, whether successful or not. We likewise wish to mention that they are all chronic cases, most of them having undergone a variety of treatment, including correction of visual defect by glasses, without any relief however.

It will be observed that in the following article we have occasion to mention a symptom concomitant with hyperæsthesia of the retina, which we designate as *temporal reflex*. As attention has not been called to this symptom by previous writers, we shall briefly describe it, reserving for a future article its full significance in certain ocular troubles. This reflex phenomenon is elicited by gently stroking the temple with the finger from the ear towards the outer canthus of the eye. In a few patients, a small sensitive spot, about one centimetre in diameter, is found on the forehead just above the eyebrow; again, immediately below the lower eyelid. Patients describe the sensation arising from this as if they were slightly pricked by needles. It is a symptom found in hyperæsthesia of the retina, retinitis, asthenopia, sympathetic ocular troubles, and is accompanied at times with venous fulness and swollen eyelids.

Case I. *Hyperæsthesia of retina; temporal reflex; sensibility—steel; cured.*—C. H. F., æt. 35; engineer U. S. N.; married.

Three years ago, after a great deal of mental strain and use of his eyes in rendering his accounts to the Navy Department, he began to experience great pain in and around the eyes when exposed to artificial or sunlight. Gradually this symptom became so distressing that the patient became unable to take exercise during the day, and was only able to do so after dark, and then he had to avoid gaslights in the windows and streets.

For this condition he consulted various oculists (ten), both in New York and Philadelphia. He was given glasses for his manifest hypermetropia, and at the hands of several he went through thorough and varied courses of medication. His condition went on, from bad to worse, till November 21, 1883, when we first saw him. His condition was then as follows: General health very much below par; careful examination of thoracic and abdominal organs elicited nothing of importance. The condition of the eyes was as follows: Complete intolerance of light for more than a few seconds, which would always give rise to headache, pain in the temples shooting down the back of the neck, along the arms, and sometimes over the pectoral region. There were likewise excessive flow of tears and blepharospasm. Ophthalmoscopic examination was difficult, owing to the dread of light.

By great effort and self-control on the part of the patient, the fundus oculi was explored. Conjunctivæ hyperæmic; corneæ clear; anterior chambers shallow; pupils contracted, but responsive to light; retinæ slightly reddened; arteries and veins normal in calibre; optic disks with their sheaths well defined; choroids slightly pigmented.

Vision, right eye, $\frac{20}{XX}$; J. $\frac{1}{8''}$.

Vision, left eye, $\frac{20}{XX}$; J. $\frac{1}{8''}$.

Only for a few seconds could the patient hold his vision. His manifest hypermetropia was about sph. 0.75 D. The ophthalmoscope revealed 1.75 D. of hypermetropia, slightly less in the left eye. He was ordered a solution of atropia gr. iv to f℥j, one drop to each eye thrice daily, to arrest the accommodation, to ascertain accurately the dioptric defect. This treatment was continued for four days, when his visual acuity was as follows:

Right eye, $\frac{20}{L}$; $\frac{\quad}{C}$; sph. + 1.75 D. = $\frac{20}{XX}$.

Left eye, $\frac{20}{L}$; $\frac{\quad}{C}$; sph. + 1.50 D. = $\frac{20}{XX}$.

A later examination confirmed the above record, and the full correction prescribed for constant use. Although these glasses were constantly worn, and outdoor exercise attended to as far as the patient's condition would admit, the photophobia and neuralgic symptoms remained unchanged. Considering the varied medication he had had without benefit, we concluded as a last resort to give him a trial with metallotherapy, of the success of which in apparently hopeless cases we had been eye-witnesses during our stay in Paris, under the direction of our illustrious preceptor, Dr. Burq. After repeated trials, the patient was found sensitive to *steel*, which was consequently ordered him in the form of tinct. ferri. chlor., ten drops three times daily.

Nov. 26.—Dynamometer: Right hand, 42 kilos; left hand, 36 kilos. Sleeps well all night through, which was not the case formerly; appetite improved; bowels free and regular, formerly constipated; distant vision improved; temporal reflex less exaggerated; retina more tolerant of light, but when by accident unduly excited, untoward symptoms now pass off, and a more normal condition is established in a shorter space of time.

From the above date to the present writing (January 29), the patient has kept steadily improving, till now he can read a column of finely printed matter of a daily newspaper; artificial and sunlight borne without inconvenience, which in itself is of great advantage to the patient, as he can now take outdoor exercise during the day; general condition much improved; appetite good; bowels regular; radiation of body-heat good, showing active capillary circulation. Dynamometer: Right hand, 44½ kilos; left hand, 39½ kilos. We may add, that during this interval the medicine was discontinued for one week, at the end of which time the temporal reflex became manifest, with slight intolerance to light. The drug was again given, when symptoms disappeared. At present he is not under treatment.

Case II. *Hyperæsthesia of retina; temporal reflex; general neurasthenia; sensibility—gold; discharged cured.*—Miss B., æt. 25; family history irrelevant; gave the following history: Since the age of fourteen has had periorbital pain in left eye,

also extending down track of infraorbital nerve. Asthenopia, headaches, and dimness of vision; skin of an unhealthy and earthy hue; radiation of body-heat *nil;* always has cold, clammy hands and feet; sleep fails to refresh, arises tired and exhausted in the morning, has unpleasant dreams and at times nightmare; tongue coated and flabby; breath fetid; bowels obstinately constipated—at times, no passage for two weeks. Ovarian pain in left side, with very scanty menstruation, lasting on an average two days, requiring but one napkin daily; urine variable in quantity, sometimes pale and abundant, then again scanty and high-colored.

Vision, right eye, $\frac{20}{LXX}$; J. $\frac{5}{8}$"?

Vision, left eye, $\frac{10}{CC}$? *nil.*

In the right eye the ophthalmoscope revealed no lesion other than a small spot of choroiditis in the lower and outer quadrant near the periphery of fundus. The refraction was hypermetropic. The left eye had a marked pathological change. In the macular region was the evidence of an old attack of choroiditis. The area invaded was about four disk-breadths; well-marked deposits of pigment to the periphery of the spot, while several atrophied spots were visible in the centre. There was no lesion elsewhere. The arteries and veins normal in calibre, and optic nerve with its sheath well defined. Peripheral vision good. The refraction hypermetropic.

The patient was refracted under atropia, when a spherical glass + 2 D. was found to give the patient vision of $\frac{20}{XL}$ in right eye; in left eye no improvement with glasses. Dynamometer: Right hand, 26½ kilos; left hand, 20 kilos. Tactile sensibility: Points of æsthesiometer felt at a distance of four centimetres on right forearm; on left forearm, barely distinguishable at a distance of twenty centimetres. Anæsthesia extending over left side of body. The glasses giving the best vision were prescribed. Notwithstanding this, and the usual treatment adopted in such cases to alleviate the hyperæsthesia of retina, the patient's condition was only partially relieved. Encouraged by the success of our first case, we again bethought ourselves of metallotherapy. After repeated and laborious examination, her sensibility was found to be for gold. On December 15th, we instituted the treatment by gold, *inter et extra*, as follows: Tinct. auri chlor. gr. $\frac{1}{75}$, three times daily; externally to temporal region, left arm, and leg, Burq's disks. The improvement in her eyes, less sensible to light, became manifest after the second day, and general health improved until January 10, 1884, when the following notes were made of the case:

Hyperæsthesia of retina, disappeared; temporal reflex, gone; distant vision good $\left(\frac{20}{XL} +\right)$; headache but once last week; breath much purer; tongue clean; appetite good; digestion ditto. At times, slight gastralgic pains, which are attributed to the gold, as this drug is very trying to the stomach; constipation not much relieved as yet; menstruated several days ago without pain or premonition of any kind; feels in better spirits, and is able to bear fatigue well to the extent of walking two miles without any subsequent feeling of exhaustion; sleeps well at night, and feels refreshed upon rising in the morning. Muscular strength as per dynamometer: Right hand, 31 kilos; left hand, 30 kilos. Points of æsthesiometer felt at two centimetres; now more distinctly on left arm, which had previously been insensible.

Jan. 28, 1884.—Dynamometer: Right hand, 32½ kilos; left hand, 31½ kilos. Æsthesiometer, normal; no ocular trouble; detected a small sensitive spot (temporal reflex) on right temple, about size of a split pea, several days ago, after exposure to reflected sunlight while sleighing; disappeared after a few hours' rest. General condition excellent; functions normal. Treatment discontinued.

CASE III. *Hyperæsthesia of retina; general neurasthenia; sensibility—steel.*—Miss H., æt. 21, family history good.

Nov. 22, 1883.—Vision, both eyes, $\frac{20}{XX}$; J. $\frac{1}{8}$",

but fails to read for any length of time on account of pain produced, and near vision becomes blurred; headaches, and at times pain over brow, with slight temporal reflex; no lesion in fundus oculi; hypermetropia two dioptrics; full correction given for near work.

About two years ago, during a menstrual period, after exposure to wet and cold, her catamenial flow stopped. From this time she has been troubled with the following general symptoms: Ovarian pain, left side, unbearable in erect position; leucorrhœal discharge with scanty menstruation, which is always preceded and accompanied by great distress; easily fatigued, so that she can hardly attend to her household duties; bowels irregular and constipated; extremities cold, with occasional sensations of heat.

On first trial she was found sensitive to steel, which was then and there prescribed.

24th.—Patient feels much better than she has done for weeks.

26th.—General condition still continues to improve. Steel (tinct. ferri. chlor. gtt. x, three times daily), instead of constipating, relaxes bowels, producing two daily evacuations. Appetite markedly increased, so much so that patient supplements her usual three meals with a fourth; tongue quite clean. Menstruated on the 27th and 28th, without pain, and double the usual quantity of blood; scarcely any leucorrhœal discharge after menstrual period.

From November 29th to December 23d, the patient has kept constantly improving in every respect. On December 23d she again had her menstrual period; flow considerably augmented; no pain whatever, and hardly a trace of leucorrhœa, which ceased two days afterwards, and has not been noticed since. Treatment discontinued.

Jan. 29, 1884—Patient is well and able to attend to her household duties, without any sensation of fatigue, although she is on her feet during the entire day. There has been great gain of flesh. She uses the glasses for near-work, but can do without them for a longer space of time than prior to her gain of muscular tonus. The cure has been complete in every respect.

Dr. Burq's armatures, dynamometer, and æsthesiometer were used in the cases reported.

Remarks.—The noticeable features in Case I. are the duration of the symptoms therein, completely incapacitating the patient for all active duties; the rebelliousness to all ordinary treatment, including correction of visual defect by glasses; the secondary effects they entailed, namely, anæmia, indigestion, and universal derangement of functions, due to confinement; but more noticeable still, the rapid effect of the metal appropriate to the patient's idiosyncrasy.

We especially call attention to the disappearance of the retinal hyperæsthesia, wherein are included the by-symptoms of æsthenopia and photophobia, generally so intractable, and a restoration from a chronic state of invalidism to good health.

Case II. is no less remarkable for the rapid subsidence of distressing symptoms of long standing, and the restoration of all the functions to a nearly normal standard, by the metal alone appropriate to the idiocyncrasia.

Case III. again illustrates the value of metallotherapy; the drug appropriate, once found, caused the cessation of the ovarian pain and leucorrhœal discharge without local treatment whatever. It is unnecessary more than to mention the great improvement in her general health, and the complete relief of her headaches and asthenopia, in which, however, the visual correction has its share, and the menstrual molimen more than doubled. In this case we claim for the metal the result obtained, for local applications had been used without relief.

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ON CERTAIN UNTOWARD EFFECTS FOLLOWING THE ADMINISTRATION OF TURPETH MINERAL.

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We have recently had under our personal observation five cases in which the administration of turpeth mineral was followed by unexpected symptoms.

On the occasion in question, each of eight well-nourished men, in average health, was given five grains of turpeth mineral,[1] and as emesis did not follow within half an hour, three grains additional were given, with the result of inducing vomiting, more or less copious, within twenty minutes after the administration of the second dose. Beyond a continuation of the retching for some time, and a general complaint of a sense of burning in the throat and fauces, nothing unusual was observed at the time, and but little depression immediately followed the emesis.

On the following morning, however, our attention was called to the condition of five out of the eight men above mentioned. A rather violent diarrhœa had followed in from ten to twenty hours after the administration of the drug, attended by much griping and a rather unusual amount of constitutional depression. Each of these five men had passed in the twenty-four hours succeeding the exhibition of the drug, from eight to fifteen stools. These stools at first resembled those of calomel, but eventually became yellow. Appropriate treatment was administered, and on the following day the diarrhœa was partially or wholly checked, and the cases progressed favorably to recovery. It is worthy of note that in each case, the first few stools contained minute particles of the yellow sulphate, showing that not only had its elimination by emesis been far from complete, but also that the drug had been for from ten to twenty hours in contact with the tissues and fluids of the digestive tract.

In the fifth case, John H., a German, æt. 38, complained of a soreness of his gums, and of the large amount of saliva dribbling from his mouth. He had, up to this time, received no preparation of mercury for several months. An examination showed the gums to be soft and spongy, with the teeth partially loosened, the tongue swollen, covered with a thick, yellowish coat, and showing distinctly the imprint of each tooth. This, together with the large amount of saliva secreted, and the characteristic fetor of the breath, proved it to be a well-marked case of salivation, such as is fortunately rarely witnessed at the present day, either in hospital or general practice. Under appropriate treatment, however, the man improved, and was ultimately cured.

Had the cases been younger, or less vigorous, a different termination might have resulted.

At the time we regarded these results as peculiar, but shortly afterwards our attention was called to an article by Dr. McPhedran,[1] in which was given a detailed account of two fatal cases occurring in children, in which, however, emesis failed to result, as also a similar case in the *Medical and Surgical Reporter*.[2]

Upon examining the literature of the subject we find that Dr. Hubbard, of Maine, was among the first to use this drug, but to Dr. Fordyce Barker, of New York, belongs the credit of bringing it prominently before the attention of the profession. In an article on "Croup,"[3] Dr. Barker states that after an experience of twenty years, he considers turpeth mineral the best emetic for use in this disease, and goes so far as to recommend that it be kept on hand

[1] The drug was purchased from a reliable wholesale dealer in this city.

[1] The Medical News, December 22, 1883, p. 682.
[2] January 19, 1884, p. 93.
[3] American Journal of Obstetrics, May, 1870.

in all families with children of a croupy tendency, administered at the earliest symptoms of an attack, and before sending for a physician.

Abroad, also, the drug seems to have been received with favor. Drs. Desmartis and de Titray,[1] who consider the membrane in croup as due to the result of blood-poisoning of a fermentative character, advocate the merits of the remedy as twofold, viz., as exerting a specific agency upon the ferment, and also as removing the deposits by emesis. They record its use in a number of cases, of different ages, with good results.

Again, Dr. Smith,[2] in his work on *Diseases of Children*, speaks of this drug in connection with croup, and mentions it as probably the best emetic in ordinary cases of this disease.

Prof. Alfred Stillé[3] quotes two cases occurring in adults with fatal results. In one, a boy, aged sixteen, took about a drachm of the drug; symptoms of the ingestion of an irritant poison followed, together with great salivation, and death ensued in a week's time.[4]

"In the second case, a man, æt. 27, took forty grains of this medicine by mistake for Æthiops mineral. The primary symptoms were precisely the same as in the above case just related. Death occurred at the end of ten days. The inner surface of the mouth, gums, palate, and fauces were covered with black sloughs; the parotid and submaxillary glands were enlarged; the mucous membrane throughout the intestinal canal was softened and easily torn; the glands of the stomach and intestines unnaturally large; the kidneys were much enlarged and the bladder full of urine."

A case of poisoning, with recovery, by the same drug, in a dose of "less than a drachm," is reported by Yowndes.[6]

In the *United States Dispensatory*[7] we find it stated that the drug in question operates with great promptitude, but sometimes excites salivation.

As seen by the references above given, our cases present little of novelty, excepting that the dose we used was quite within therapeutic limits, as ordinarily given; but we deem it our duty to call attention to the danger attending the administration of this drug, especially as its poisonous properties seem to have been overlooked by several recent writers on therapeutics.

Prof. Bartholow,[8] it is true, states that "serious results might be produced if emesis did not so promptly follow," which seems to agree with the experience of Dr. McPhedran already mentioned. In the cases under our own observation, however, the poisonous symptoms followed, notwithstanding that fairly copious emesis resulted in every case. The time which elapsed between exhibition and emesis (thirty-five to fifty minutes) was possibly sufficient to permit the occurrence of chemical changes in the drug as it lay in the stomach, and the minimum time of ten hours elapsing between the ingestion of the drug and its final elimination with the feces was (in one case at least) fully sufficient to account for the resultant symptoms, which were of a character tending to substantiate the statement of Miahle, that all mercurial preparations are absorbed in the form of chlorides.[1]

We are informed by several prominent dealers in drugs that the demand for turpeth mineral is quite large, and is apparently growing. This fact, together with the praise it has received in several quarters, justifies us in emphasizing the following conclusions, based upon the observations, old and new, which are given above:

1. That a dangerous quantity of turpeth mineral often remains in the stomach after emesis.

2. That this drug possesses sufficient toxic and irritant properties, not only to demand from the profession much more than usual caution in its administration, but to condemn its use where the exhibition of any other emetic is practicable.

3. That it should not be placed in the hands of the laity.

[1] Nouveau traitement du Croup et des Angines courmeuses, par les Docteurs Fillippa P. Desmartis et Alphonse Bruche de Titray, Paris, 18?0, p. 28.
[2] Fifth edition, p. 548.
[3] Therapeutics, fourth edition, vol. ii. p. 769.
[4] Letheby, London Medical Gazette, xxxix. p. 474.
[5] Taylor, Guy's Hospital Reports, 3d series, x. 180.
[6] Abstract in Lancet, March 10, 1860.
[7] Fifteenth Edition, p. 767.
[8] Therapeutics, fifth edition, p. 252.

MEDICAL PROGRESS.

THE TUBERCLE BACILLUS.—In a recent paper on "The Diagnostic and Prognostic Value of the Tubercle Bacillus," DR. G. H. MACKENZIE draws the following conclusions:

1. The bacillus of tubercle is pathognomonic of tubercular disease; found in the sputum it indicates that active tubercular disease is in progress in the lungs, in the larynx, or in both.

2. It is absent in non-phthisical disease, in some cases of chronic (fibroid) phthisis, and during quiescent stages of the disease.

3. It is found in greatest numbers in acute phthisis with fever, softening, and cavity formation, but is also present in fair numbers before consolidation can be detected, especially if the larynx be affected, and it is thus useful in the diagnosis of incipient phthisis.

4. In a given case its numbers vary according to the nature and origin of the pulmonary secretion, and the period of the day at which it is expectorated, as also according to whether it is or is not free from extraneous matter in excess—*e.g.*, gastric secretion, saliva, or blood.

5. Found in the laryngeal secretion on its direct removal, it is a most valuable aid in the diagnosis of laryngeal tuberculosis.

6. In hemorrhage from the lungs, the presence or absence of tubercle bacilli in the hemorrhagic fluid has a most material influence on the prognosis.

7. Negative results in important or dubious cases cannot be held as conclusive unless examinations by different methods have been made on at least three different occasions.

8. Whilst its diagnostic value is thus of a very high standard, indicating the existence of tubercular disease, its prognostic value cannot be determined with accu-

[1] See THE MEDICAL NEWS, January 26, 1884, p. 89.

racy, inasmuch as it may be as abundant in a comparatively slow non-febrile case as it is in a more acute and febrile one.—*Edinb. Med. Journ.*, February, 1884.

Action of Aconitine on the Heart.—When one studies, says M. Laborde, the action of crystallized aconitine on the heart of the frog, the following results are constantly obtained: with very small doses, about gr. $\frac{1}{320}$, after four or five minutes, a progressive acceleration is noted, which tends to tetanic arrest. After this, the heart regains its normal function, as though the aconitine acted in the same manner as section of the pneumogastric. A proof experiment confirms the results recently announced by François-Franck; if the action of the pneumogastrics is suppressed, either by atropine or curare, the typical action of aconitine does not appear. It would seem that the drug does not affect the intracardiac ganglia, nor the central end of the pneumogastric.—*Gazette Hebdom.*, February 1, 1884.

A Vibrio Observed During Measles.—M. J. A. Le Bel reports that he has observed in the urine, during measles alone, the appearance of a slightly curved rod, very refracting, about one inch in diameter and endowed with very slow movements. The length varies considerably, so that the observer sees them of every appearance, from that of the typical vibrio to that of the bacteria.

In the case of ordinary measles, this vibrion only appears in the urine during a few days, and disappears almost simultaneously with the appearance of the fever and swelling of the face. He has observed, in the case of an infant, on the second day of the eruption, the vibrio and spores; the protoplasm which enveloped them disappeared very rapidly.

The naturally acid urine is a favorable soil for this micro-organism; it may be found in abundance in the vessels in which the urine is placed, distributed in the mass of the liquid. It is well, if one wishes to judge of the intensity of any particular attack, to examine each specimen of urine as it is passed.

This vibrio makes its second appearance at the desquamative stage; at that time also it is easy to recognize it. The skin may be scraped and the scales placed first in sterilized water and then in sterilized urine; within twenty-four hours large numbers of the micro-organism may be seen. In severe and persistent cases, it reappears in the urine and on the skin for weeks and even months.

Le Bel states that he has been extremely careful in his observations, and has no reason to think that they are not correct.—*Journ. de Méd. de Paris*, Jan. 19, 1884.

Traumaticine.—Traumaticine is the name given by Schivardi to the solution of one part of pure guttapercha in ten parts of chloroform, and may be used as the vehicle for the application of various substances to the skin. It forms on the skin a hard, resistant, and lasting pellicle. The solution can be made ready for application in a very few moments. The slow volatilization of the chloroform from the mixture enables one to use it for frictional applications.

Traumaticine is not irritating, and has also the advantage of being cheap. It has been especially recommended by Prof. Auspitz. In the treatment of psoriasis, he uses a ten per cent. solution of traumaticine and chrysarobin; after having detached the greater part of the scales by a soap-bath, the solution is applied, by means of a fine, short brush, to the patches, the part being rubbed with the brush. Each application is preceded by a soap-bath—repeated more or less frequently, according to the intensity of the affection. In a few cases, one application a day will suffice, and the patient is cured in four or five days. The application never causes the least irritation. Auspitz has several times used it for herpes tonsurans, eczema marginatum, and prurigo. In the last affection, a ten per cent. solution may be used for adults, and a five per cent. for children; ordinarily the prurigo disappears suddenly.

Traumaticine is also a good excipient for pyrogallic and salicylic acids. Schivardi uses it in the treatment of chilblains, and proposes it as a remedy in acute orchitis.—*Gazz. degli Ospitali*, December 29, 1883.

Obliteration of the Abdominal Aorta.—Gyselynek reports the case of an officer, æt. 23 years, addicted to drink, and under treatment for syphilis for a period of three years, who died of gangrene of the lower limbs. He had suffered for five years with palpitation of the heart, symptoms of oppression, slight cyanosis, and a quick, small pulse. On the fourth day after admission to the hospital, the lower extremities became cold, and he complained of pain along the larger vessels. This was followed by loss of sensibility in the legs and increased temperature. On the seventh day, gangrene set in, and gradually extended upward to the sacrum, when the patient died on the thirtieth day. The autopsy showed that the aorta was obliterated by a thrombosis just above the bifurcation. The centre of the thrombus contained micrococci.—*Centralbl. für Chirurgie*, December 22, 1883.

Cockleburr in the Larynx; Laryngotomy. Dr. E. Van Note reports the case of a girl, æt. 11 years, who accidentally got a cockleburr into the larynx. Having attempted in vain to remove the foreign body through the mouth, laryngotomy was performed two days after the accident, and the burr removed. The child made an easy and quick recovery.—*St. Louis Courier of Med.*, February, 1884.

Total Vaginal Extirpation of the Uterus.—Dr. W. A. Duncan successfully removed the entire uterus, per vaginam, for malignant disease, on January 22d, at the Royal Hospital for Women and Children. The patient, according to the *Lancet* of January 26th, is progressing satisfactorily.

Antifermentative Properties of Bichromate of Potash.—Dr. Laujorrois has recently made experiments which have demonstrated that bichromate of potash possesses antifermentative and disinfectant properties to a high degree. Bichromatization (the word by which he expresses his new method of disinfection) will indefinitely protect animal matters from the action of the causes of putrefaction.

In March, 1876, a physician sent to Dr. Laujorrois a scirrhus of the mammary gland, which he had removed. It was macerated for a month, at a temperature of 10° or 12° C., in an aqueous solution of bichromate of potash (grs. v. to f℥j.). It was then taken out and exposed to the free air, without any covering to protect it from the

action of external agents. Since that time it has undergone extreme variations of heat and moisture, but in November, 1882, it showed no sign of putrefaction.

In February, 1882, he placed five hundred grammes of urine in an open vessel and added five grammes of bichromate of potash to it. Eight months afterward, the urine thus bichromatized, presented no sign of putrefaction. It was clear, limpid, and without sediment or odor. Human blood, treated in the same manner, was found to be equally well protected against putrefaction.

The excrements of phthisical patients mixed with a 1 to 100 solution of bichromate of potash, immediately lost all odor. Milk has been treated in this manner, and with the same results as to the absence of putrefaction.

Laujorrois reports a case of malignant pustule treated by incision and bichromate dressing 1 to 100, and the patient was cured on the fifteenth day.—*Journ. de Méd. de Paris*, December 29, 1883.

MOIST GANGRENE OF FOOT AND LEG TREATED BY AMPUTATION THROUGH THE MIDDLE OF THIGH.—The following case, under the care of MR. PAGE at Newcastle-upon-Tyne Infirmary, is confirmatory of the views expressed in an editorial in THE MEDICAL NEWS, of January 5.

A gardener, aged fifty-nine years, a very intemperate man, was admitted on September 13, 1883, in consequence of moist gangrene of the right foot and leg. The disease commenced thirteen weeks previously, and it was still progressing. All the toes had separated. The whole of the foot was dead, and a large patch of gangrene had just appeared on the outer side of the leg. The stench was intolerable, and the man was reduced to such an extent by pain and exhaustion that it seemed probable, if unrelieved, he would not survive many days. His whole arterial system was in a very pronounced condition of calcareous degeneration. On September 14, the limb was amputated through the middle of thigh. The femoral artery was so much diseased that an attack of secondary hemorrhage was fully anticipated; but all went well, and on September 24, the antiseptic dressings were discontinued, as the wound was entirely healed. The patient remained in hospital till October 21, and was then discharged with a good sound stump.

Whether it is better to amputate or not in cases of spontaneous moist gangrene, and if so, where and at what stage of the disease, are questions upon which there is room for much difference of opinion. In every instance in which Mr. Page has waited for a line of demarcation to form, the patient has died exhausted. In this case the relief which followed the removal of the limb was immediate; the tongue became moist, the look of prostration soon passed away, the patient was at once able to sleep and to eat, and the wound healed by first intention.—*Lancet*, January 5, 1884.

AN IMPROVED METHOD OF AMPUTATING THE PENIS.—SURGEON-MAJOR T. J. MCGANN gives the outlines of four cases of amputation of the penis by the following method: The patient is placed on the table in the lithotomy position, and chloroform having been given, an assistant, holding the scrotum in both hands, draws it forwards, keeping the raphe of the scrotum and perineum in the same line. An incision of two and a half or three inches in length is made behind the scrotum in the median line, with its centre over the bulb; the corpus spongiosum having been completely exposed, and a little fine dissection made so as to separate it laterally from the corpus cavernosum, the scrotum is allowed to drop and is drawn slightly backwards, and the penis having been seized, is pulled forwards and removed by a single sweep of the knife close under the pubis. The few bleeding vessels having been twisted or tied, the scrotum is again drawn forwards as before, when the cut surface of the corpus spongiosum presents itself through the posterior incision, and this being separated from the corpus cavernosum, is turned down into the perineum, and left hanging out there half an inch beyond the level of the skin. The front and back incisions are then united by a few points of suture, and the protruding spongy body slit on the lower or posterior aspect and the edges united to the perineal skin on either side by two points of suture. The operation is completed.

On the completion of the operation there is but a small wound visible in front, and the scrotum, which is practically intact, has to be raised to render the posterior incision visible.—*Indian Med. Gazette*, December, 1883.

A NEW MERCURIAL PREPARATION; HYDRARGYRI TANNICUM OXYDULATUM.—DR. SIGMUND LUSTGARTEN has recently called attention to the chemical and therapeutic properties of a new mercurial salt, which he prepared in the laboratory of Prof. E. Ludwig, and which he has employed in the different forms of syphilis.

This salt is the tannate of the protoxide of mercury (hydrargyri tannicum oxydulatum), which contains fifty per cent. of mercury. It is a dull green powder, without odor or taste, and is only soluble when decomposed. Hydrochloric acid makes no sensible impression upon it, but very dilute alkalies, ammonia, solution of caustic potash, and the alkaline carbonates, reduce it in a short time to a sort of magma composed of very small particles of metallic mercury. They are so minute that the greater part of them present, under the microscope, the phenomenon known as molecular movement. This process of reduction is produced under the influence of the alkaline reaction of the intestinal juices; whence, it may be asked, if the absorption of the particles of mercury is produced in the same way in the intestines as on the skin by mercurial friction? The determination of this question has occupied the attention of Lustgarten for some time. He has now been able to demonstrate the rapidity of the absorption of mercury into the blood, having found mercury in the urine in twenty-four hours after its administration.

This new drug has been prescribed in two or three doses of grs. jss every day, but in spite of this seemingly large dose no troubles of the stomach and bowels have been observed, nor the troubles usually seen when the ordinary mercurial preparations—calomel or corrosive sublimate—are administered; nor has stomatitis or salivation been observed, although the very large dose of grs. xc has been given. On the contrary, in ten cases treated, up to this time, comprising every period of syphilis, and especially cases of relapse of a very rebellious nature, as syphilides with small papules and pustular syphilides, there was so rapid a regression of the lesions that Lustgarten does not hesitate to place the new drug by the side of the best mercurial preparations hitherto employed. —*Ann. de Dermat. et de Syphil.*, January 25, 1884.

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THE TREATMENT OF DIPHTHERIA.

IN an editorial last week we considered the subject of the topical treatment of diphtheria. We now turn our attention to its systemic management.

Medicines, properly speaking, are prescribed in diphtheria for two purposes: to check the exudation, and to prevent the diffusion of the germs of the poison. Certain special indications are afforded in the state of particular organs; as, for example, irritability of the stomach; endocarditis; albuminuria; delirium; each of which may demand special attention. Again, the method of treatment may be merely symptomatic, or it may be specific—directed against the symptoms as they appear; or used to produce a curative effect by some unknown influence over the *fons et origo mali*. As, in the present state of uncertainty regarding the latter, the remedies which have a truly specific character cannot be determined, it will be better to consider the treatment from the symptomatic point of view.

Rarely are antipyretic remedies necessary. In the more formidable cases, the temperature may be but little elevated, may, indeed, be subnormal. In the more vigorous subjects, having a sthenic activity, the first signs of faucial inflammation are best encountered with the tincture of aconite root, one or two drops every hour or two. If, on the other hand, circulatory depression and low or subnormal temperature are the conditions present, good results are had from belladonna tincture, two to five drops every three to six hours. As an irritable stomach may be present from the very beginning, the remedies used must be directed to this symptom. Then creasote, or carbolic acid, with or without tincture of iodine, becomes exceedingly useful. If convulsive phenomena, excessive nausea, and depression of the circulation coexist at this period, calomel in small doses—one-fourth, one-half, to one grain—given at short intervals has an excellent effect in checking the nausea and the nervous disturbance. When the cathartic action takes place, it should be discontinued, and carbolic acid or creasote given.

Bromide of ammonium appears to us to have an excellent effect in checking the diphtheritic exudation. It has a sedative action on the fauces, and, being eliminated, in part, by the mucous membrane of the pharynx, makes a local impression antagonistic to the morbid action. It may, therefore, be regarded as having an action of specificity—as an agent destructive of the microbes undergoing multiplication in the mucous membrane. The time for its administration is when the exudative process is beginning, and before systemic infection, or, at least, systemic depression, has occurred. It is not useful when the condition of gangrene, or septicæmia, or decided adynamia is present. It should be given in moderate doses of three to ten grains, frequently, and well diluted.

The most popular remedy in diphtheria, amongst the profession at large, is chlorate of potassium. There is a notion prevalent that it has a specific action. The origin of this conception is obvious. In certain cases of stomatitis the curative action of chlorate of potassium has that degree of certainty and promptness which belongs to the effect regarded as "specific." Its use in diphtheria has been generalized from this admitted curative action in stomatitis in accordance with the ancient therapeutical maxim—"a remedy which has proved curative in one case, must act beneficially in analogous cases." In this instance, as in so many others, the rule is fallacious. The good results due apparently to the chlorate, are, in many cases, only the outcome of the *post hoc*. All objections considered, there is still a mass of clinical observation more or less favorable to its use. We may admit that in the early stages of diphtheria it can do some good, but if the kidneys become damaged it not only ceases to be useful, but may be injurious. If, as Feltz and Ritter have shown, the symptoms of uræmia are due to the retention of the potassium salts in the blood, the exhibition of the chlorate can only increase the head symptoms.

The combination of the tincture of ferric chloride with chlorate of potassium is probably more widely used than the latter alone, and, doubtless, justly so. Clinical experience appears to be in favor of the combination, but how far its utility is supported

numerically remains to be shown. Good results have, apparently, been produced by the topical application of the solution, conjoined with its stomachal administration.

Since Guttmann's very enthusiastic introduction of pilocarpine, the utility of this remedy has been both denied and reaffirmed. It acts surprisingly well in some cases, but is entirely unsuited to the greatest number. When the false membrane is not extensive, tends toward or invades the larynx, and the vital forces are not depressed, pilocarpine softens and detaches the exudation, and has a favorable influence over the subsequent progress of the case. In the septicæmic form of diphtheria it is generally contraindicated, but in the event of urinary suppression it may render an important service. Whenever cardiac failure is threatened it is inadmissible. Notwithstanding the limitations imposed to its use by reason of its depressant action, cases have come to our knowledge in which, although the contraindications were pronounced, and the general aspect unfavorable, it proved remarkably effective.

The increasing importance of the germ theory, and the unquestionably good effects of that class of remedies known as germicide, render the use of certain antiseptic agents highly interesting and suggestive. Quinine belongs to this group. It is employed, however, rather to stimulate the vital processes than to arrest the development of microbes. Indeed, it may be well questioned whether it can destroy the micrococcus of diphtheria, as it surely cannot prevent its pullulation. The use of large doses is to be deprecated, for the depression of function thereby caused cannot fail to be injurious. On the other hand, small doses serve a useful purpose in promoting the activity of the assimilative functions.

Unquestionably, the most powerful antiseptic now available for the destruction of germs is the corrosive chloride of mercury. It has been shown, also, that this agent is, within certain limits, a reconstituent tonic. In addition to theoretical considerations, clinical experience can be adduced in its favor. There is a growing disposition to regard it as the most important means now available to check the formation of false membrane, and to prevent the diffusion of germs from the point of local infection. Calomel, in part converted into bichloride, probably, acts similarly. This remedy has long occupied a high place in the esteem of a few practitioners who have employed it in the so-called true croup, as a sedative and an aplastic agent. With this view, doses of calomel, which must be regarded as "massive"—from five grains to a scruple every four hours—have been employed with asserted advantage. Any curative effect exerted by mercurials must be referred to three chief influences: parasiticide, aplastic, and eliminant. Doubt no longer exists in regard to the parasiticide power of the corrosive chloride, and calomel, although less active, must possess somewhat of the same property. Although we believe that, in general, mercurials do not affect the formation of false membrane in diphtheria, they act in one respect like pilocarpine; they act on the glandular apparatus of the mouth and fauces; the exudation is softened and detached, and, probably, its reformation checked. To these effects of mercurials must be added the eliminant. The stools produced by the purgative action of calomel in cases of diphtheria are peculiar in appearance and character, and are offensive in a marked degree. Septic materials are thus eliminated from the system.

Iodine has a place similar to that occupied by mercury. It is destructive of germs, hinders their diffusion, and checks the fermentative process, to which they are necessary. Its utility is, in our judgment, very great. The best form of administration is Lugol's solution, and with this may be combined carbolic acid, especially when the stomach is irritable, and when more active antiseptic action is demanded.

The phenol group, composed of carbolic acid, salicylic acid, resorcin, thymol, chinolin, and some others, from the theoretical standpoint, should have a good effect by destroying the specific germs, and arresting the morbid fermentations, either initiated or promoted by them. The practical results achieved by these remedies are not equalled by the expectations which *a priori* would be formed of their utility. The best effects have been witnessed from resorcin. Probably, phenoresorcin will prove still more useful. Allied to the agents of this group are eucalyptol and turpentine, both of which have been used with, apparently, good results. Whilst the phenol remedies are prescribed with reference to their antiseptic powers, eucalyptol and turpentine are indicated when the surface is cyanosed and the circulation feeble.

The complications of diphtheria demanding interference are, properly speaking, mere incidents in the course of a disease which may leave no single organ unharmed. The extension of the exudation to the nasal or laryngeal mucous membrane; the paralytic phenomena; the cardiac changes, and the kidney lesions, are the most important. Besides the treatment appropriate to the disease in any situation, special measures are necessary for these complicating conditions. It is more especially in laryngeal diphtheria that pilocarpine, bromide of ammonium, calomel, and lime-water spray are suitable remedies. In nasal diphtheria, the local use of carbolic acid, carbolate of iodine, and resorcin solutions, following a preparatory treatment by the

solvents; and the systemic treatment by alcohol, corrosive sublimate, and quinine.

As the paralytic phenomena play a serious *rôle* in the morbid complexus, it is in a high degree important to prevent the functional derangement of the nerve centres, on which the loss of power depends. The precise seat of the disturbance of function has not been fixed on, but some recent observations tend to establish the existence of temporary lesions of the multipolar ganglion cells of the anterior cornua, and of the nerve trunks. The ganglia of the sympathetic are probably the media through which the impressions are conveyed to the nerve centres. It follows that the remedies best adapted to act on the paralysis are picrotoxin, ergot, belladonna, and digitalis. The usual error consists in waiting for some overt act before prescribing for the paralysis, and sudden death may signify choking of the glottis, paralytic congestion of the lungs, or a weakened heart. For the last mentioned and the sluggish circulation dependent thereon, we have a hopeful remedy in nitroglycerine. As endocarditis and interstitial nephritis may be due to migrating micrococci colonies, the most effective remedy will be corrosive sublimate.

A wise and diligent supervision should be maintained over every case of diphtheria until complete restoration to health will warrant security. The mildest case is not without its evil side. Any case may consist in a succession of surprises. He will prove the most successful therapeutist who conjoins to careful management of existing conditions judicious provision against possible accidents.

MICROCOCCI AND ACUTE SUPPURATION.

From observations published by Ogston, of Aberdeen, in 1880 and 1881, it would appear that micrococci are the exciting causes of acute suppuration. Thus, the contents of seventy-four ordinary abscesses, examined immediately after their evacuation, disclosed an abundance of these organisms, which had penetrated into the tissues without any injury of the surface. Inserted under the skin of small animals, the pus ordinarily set up suppurative inflammation, and the animals exhibited signs of febrile disturbance. In chronic or scrofulous abscesses, on the other hand, micrococci could not be detected, nor was the injection of the pus contained in them followed by abscess or illness.

The conclusions of Ogston have not been confirmed by more recent experiments conducted by German pathologists. In Virchow's *Archiv*, Bde. lxxxvi., xc., and xcii., may be found papers from the pens of Ustkoff, Orthmann, and Councilman, which represent not only their own views, but those of Ponfick, Rosenbach, and Cohnheim, as to the occurrence of suppuration without the intervention of low forms of life. Through the subcutaneous injection of oil of turpentine, croton oil, and olive oil, under antiseptic precautions, suppuration was provoked, but the pus did not contain micrococci.

The experiments of the German observers demonstrate the occurrence of acute suppuration without the presence and intervention of micrococci, and render the position of Ogston, to say the least, questionable. Still more recently, however, Straus, in a contribution to the *Bulletin de la Société de Biologie*, for 1883, has repeated these investigations, and reached the conclusion that not only are micrococci essential to the formation of pus, but that the irritants employed by his predecessors are not pyogenic, although they are phlogogenic. In other words, the German observers induced suppuration by irritating injections, but their methods were faulty in that they permitted the entrance of germs beneath the skin which they failed to detect. Straus found micrococci in the five cases out of eighteen in which pus followed the insertion of oil of turpentine; and he bases the correctness of his statements upon the thirteen negative results, without appearing to imagine that his methods may be considered faulty.

We may be permitted to say that pathologists demand more convincing proofs of the causal connection between micrococci and acute suppuration than have as yet been presented to them. One set of observers assert one thing, another set, equally dogmatic, assert another; and it would be strange indeed if their followers were able to reconcile their conflicting views. Will not Koch and his equally careful assistants undertake the solution of this vexed and interesting question?

TOXIC EFFECTS FROM EMETIC DOSES OF TURPETH MINERAL.

The cases reported in our issue of this week showing the toxic effects of subsulphate of mercury, when given as an emetic, are peculiarly timely—for, as the reporters state, the use of this remedy has been increasing. The popularity of this emetic is owing to the unqualified praise of Dr. Barker, to whom the modern revival of this remedy is due. In his article commending it, Dr. Barker makes no distinction as to the form of croup requiring it, nor does he differentiate between true croup and pseudo-croup. It is true, he makes several varieties, which it must be admitted have no pathological existence, but much the largest number of cases in which his croup powders are used, are really examples of laryngismus stridulus. It need hardly be asserted that in a malady so little important, so powerful a remedy is unadvisable.

The immunity with which turpeth mineral is given as an emetic, depends on the promptness and completeness of its action—on the return of the poison with the vomited matters. From this point of view a full dose is safer than a small one. But not all subjects are equally susceptible to its action. There are some on whom it acts imperfectly and slowly, thus giving time for its irritant action. There are a few on whom it appears to have no proper emetic effect, and hence they suffer from gastro-enteric inflammation, and acute mercurialismus. We have known some instances of this kind, and can, therefore, confirm the observations of Drs. Randolph and Roussel.

All deductions made, there yet remain two classes of cases in which subsulphate of mercury is undeniably useful. First, the cases of "inflammatory croup"—so called by Dr. Barker—really examples of acute laryngitis; second, cases of true croup. In the light afforded by the accidents from its use, this remedy should not be administered in laryngismus stridulus.

THE ASSAY OF QUININE PILLS.

THE method for the assay of quinine pills, as detailed in a circular recently issued by Messrs. McKesson and Robbins, in accordance with their promise of last month to furnish a new and simple process, is, in a slightly modified form, that most commonly adopted by chemists for such investigations, with the application of the same principle adopted by THE MEDICAL NEWS COMMISSION in its investigation of the commercial samples of the article.

This method consists essentially in dissolving a definite number of the pills in water acidulated with diluted sulphuric acid, by the aid of a gentle heat, precipitating the alkaloid by ammonia water, and subsequently abstracting the alkaloid from the mixture by means of ether. While, however, in our previously reported analyses, the mixtures containing the alkaloid, made alkaline by ammonia water, were agitated with successive portions of pure ether until the aqueous liquid, after acidulation, no longer afforded any reaction with alkaloidal reagents, and the entire amount of ethereal liquid afterward was evaporated, the proposed method of manipulation limits the amount of ether for the abstraction of the quinine from twenty grains of sulphate, to fifty cubic centimetres. By the subsequent evaporation of twenty-five cubic centimetres of the ethereal solution so obtained it is assumed that one-half of the alkaloid contained in the mixture will be thus represented.

Although the latter method of procedure, when carefully followed, will afford *approximately* correct results, which, indeed, is all that is claimed, it is questionable whether it would commend itself to careful analysts, or even in inexperienced hands afford results so satisfactory as the obtainment of *all* the alkaloid by the use of larger and successive portions of ether.

For the evaporation of the ethereal solution, the use of a watch-glass, as recommended in the process, is open to serious objection. The extreme volatility of ether, together with the remarkable density of its vapor, would, with the greatest care, almost necessarily involve considerable loss in its evaporation from so shallow a surface, by spreading over the edge of the receptacle; and a capacious tared glass capsule of greater depth, or a tared glass flask, would be much better adapted to the purpose.

Since crystallized quinine loses its water of crystallization at 125° C., and fuses at 168° C., the directions to heat the evaporated product "strongly" by holding the glass, with "a pair of crucible tongs or any convenient substitute, over a gas or spirit flame," should be followed with considerable caution to avoid decomposition; when available, a hot air-bath, with proper regulation of temperature, would be far preferable to the application of direct heat for the dehydration of the alkaloid.

In the calculation of the result of an analysis, instead of multiplying the amount of anhydrous alkaloid obtained by 436, and dividing the product by 324, it need but be multiplied by the factor 1.3456, when the product will at once represent the corresponding amount of crystallized sulphate $(C_{20}H_{24}N_2O_2)_2H_2SO_4,7H_2O$.

In the test for the purity of the quinine, the amount of ether directed to be employed to dissolve the latter ("six times its weight of ether, sp. gr. 0.725") appears remarkably small, since the United States Pharmacopœia and other authorities state that crystallized quinine requires about *twenty-five parts of ether* for solution.

THE CHOLERA BACILLUS.

IN another column will be found a statement of the latest results of the labors of the German Cholera Commission now in Calcutta, which, with the letter of our Berlin correspondent, furnishes the full text of Koch's fifth report.

It will be noted that there were found in the intestines of cholera patients the same bacilli as were found in Egypt; that these bacilli were isolated and successfully cultured, and that they possessed characteristic properties as to form and growth, and can now be recognized with certainty from other bacilli. These characteristics are not described in detail, but no bacilli presenting them have been found in the intestines of eight persons dying of other diseases, or in the intestinal contents of

other animals or in other substances rich in bacteria. It need scarcely be said that these results are of the greatest importance.

The profession will await with interest the reception which will be given by the savants of the French capital to Koch's explanation of the discrepant results obtained by the French Commission in Egypt. For it is scarcely conceivable that the members of the Commission selected by the distinguished Pasteur should know so little of the histology of the blood as to be misled by blood-plates.

SOCIETY PROCEEDINGS.

NEW YORK STATE MEDICAL ASSOCIATION.

Convention for Organization held in Albany, February 4th and 6th, 1884.

MONDAY, FEBRUARY 4TH. FIRST SESSION.

In compliance with an invitation issued during the last week of January, a number of members of the medical profession of the State of New York assembled in the parlors of the Delavan House, Albany, at 8.30 P.M., February 4, 1884.

After calling the roll, seventy-six being present (more entered the rooms later, making a total of about one hundred), the object of the convention was briefly stated by DR. J. W. S. GOULEY, of New York, as follows:

In view of the dissension which has been created in the Medical Society of the State of New York by the radical change made in its Code of Ethics, it was suggested that a convention be held on the day preceding the session of the State Society, to discuss the question of this change in all its aspects, and finally to take such action as the majority assembled should decide upon. Therefore it is, Gentlemen, that you have been invited to meet here by members of the profession who have signed the call for the convention, which is as follows:

The undersigned, permanent members of, and delegates to, the Medical Society of the State of New York, request you to attend a meeting to be held in the parlors of the Delavan House, Albany, on Monday evening, February 4th, at 8.30 o'clock, to take into consideration the question of the Code of Ethics, which will come up before that Society on the day following.

TEMPORARY OFFICERS.

DR. H. D. DIDAMA, of Onondaga County, was called to the Chair, and DR. CHARLES S. WARD, of New York County, was appointed Secretary.

On taking the Chair, DR. DIDAMA stated that the object of the conference was to exchange opinions regarding the proper course to be pursued by the adherents of the National Code of Ethics.

Telegrams were read from Drs. John P. Gray, of Utica; J. G. Orton, of Binghamton, and C. C. F. Gay, of Buffalo, regretting their inability to be present.

THE CANVASS OF THE STATE.

DR. GOULEY, of New York, then presented a report of the canvass of the State, and made the following statement:

Total number of physicians in the State,	5002
Number of those who have not expressed their preference,	1142
Total number of votes recorded,	3860

The recorded votes are as follows:

For the National Code,	2547
For the "New Code,"	1040
For no code,	239
Unclassified,	34
Total,	3860

It is evident from these figures, he said, that there is a majority for the National Code over the whole number of committed and uncommitted. That there is a majority of more than two-thirds for the National Code over the "New Code," and a nearly two-thirds majority for the National Code over the "New Code," no code, and unclassified combined.

It is now proper that you should know how stands the vote in the State Society; and here let me say that, although we have a majority, our adherents will do as they have done before—stay away—and we shall be outvoted. I doubt much if on Tuesday night we poll more than one hundred votes. According to the *Transactions* of 1883, the State Society has thirty-three retired members, who are not entitled to vote, and should have 386 voting members and delegates, but I cannot count more than 382.

Of these there are for the National Code,	193
For the "New Code,"	134
For no code,	19
Uncommitted,	36
	382

Now, Gentlemen, that you have before you these facts and figures, I leave you to decide what measures it may be wise for this assembly of representative men to take.

TO VOTE AGAINST THE NEW CODE.

DR. E. D. FERGUSON, of Rensselaer Co., moved that all the members and delegates present in Albany, who are in favor of the reënactment of the National Code, be requested to attend the meeting of the State Society on Tuesday evening, for the purpose of protesting, by their vote, against the action taken by the Society in substituting the "New" for the National Code, and of endeavoring to secure the reënactment of the National Code.

DR. T. F. ROCHESTER, of Erie Co., seconded the resolution, and said that the members and delegates would fail in their duty if they did not present this protest.

DR. AUSTIN FLINT, JR., of New York, said: It is more than a year since I have publicly spoken to an audience of friends on the questions which have at last divided the medical profession of the State of New York. As you all well know, thus far the battle-field in the warfare against the honor and dignity of the profession has been mainly in the City of New York. In the City of New York, the conspiracy, which has brought about the deplorable conflict that has been forced upon us, had its inception. The attack upon the most sacred traditions of our profession was there made with a malignant rancor that can only be fully appreciated by

those who have been personally involved in this unhappy contest. Our experience teaches us that but one course is now open to those who are unwilling to remain in the false and humiliating position in which we are placed. The proper course is for us to organize a new State Association, to be composed exclusively of those who refuse to countenance professional relations with irregular practitioners.

The loyal members of the profession in the County of New York, having exhausted all proper means of resistance in the existing Societies, and with an untarnished record as regards the methods employed by them in the contest, have organized on a permanent basis, the New York County Medical Association, composed exclusively of those who uphold the National Code of Ethics.

To-night we should organize a New York State Medical Association. The issue has been forced upon us. We stand in the presence of the actual fact of a divided profession. The State Society and the Society of the County of New York have seceded from the regular profession of the United States. We made no movement looking to the formation of a loyal State Association until the most vigorous efforts to redeem the existing Societies had signally and hopelessly failed. We are now cast out of fellowship with the regular profession of this great country, as represented in the American Medical Association and in the medical societies of other States. We must redeem the State of New York. There remains but one course to pursue, and that is to form an Association of our own.

I hope, Mr. Chairman, that a New York State Medical Association will be organized to-night, in affiliation with the regular profession of the United States; that the existing County Societies whose membership is loyal will put themselves at once in affiliation with the new State Association; and that, in counties in which the existing societies cannot be brought in bodily, new Associations will be promptly organized, to be composed exclusively of members of the profession who uphold the National Code of Ethics.

While holding to these views, I am cordially in favor of the resolution offered by Dr. Ferguson, simply in order that we may put ourselves on record in the State Society, as I believe, for the last time.

DR. C. G. BACON, of Oswego Co., was in favor of Dr. Ferguson's resolution, and of continued efforts from year to year, until success should be achieved.

DR. FERGUSON, with the consent of Dr. Rochester, temporarily withdrew his resolution.

THE ORGANIZATION OF A NEW STATE ASSOCIATION.

DR. AUSTIN FLINT, SR., of New York, after stating that he thought it improbable that a two-thirds vote could be obtained in the State Society in favor of reënacting the National Code of Ethics, and that consequently the time had arrived for the formation of a new State Association, introduced, with a preamble reciting the well-known circumstances under which the "New Code" was adopted, the following resolution:

Resolved, That the members of the medical profession of the State of New York, here convened, do now unite in forming an organization to be known as the NEW YORK STATE MEDICAL ASSOCIATION.

The resolution was seconded by DR. FREDERICK HYDE, of Cortland Co., in a fitting speech.

DR. E. M. MOORE, of Rochester, could not believe that the time had arrived for the formation of an association separated from the State Society. He thought there had not yet been opportunity to have full expression in the State Society of opinion from the whole State, and he was in favor of postponing the organization of the association until Wednesday morning, at which time we should be better informed, and therefore better prepared with reference to our future action.

DR. ROCHESTER, of Buffalo, was very glad to think that there was a prospect of a medical association which would be strictly voluntary without any hampering by State legislation.

DR. ELY VAN DE WARKER, of Syracuse, said:

Certain issues growing out of this contest in the State Society must be grappled fearlessly, for they are inevitable. Peace can never be restored. We know this to-night just as well as we shall know it Wednesday morning. We shall go into the contest in the State Society on Tuesday night simply for form's sake, and without a hope that we shall reverse the policy of the Society; therefore I can see no reason to delay the preliminary formation of the new State Association.

Another thing which appears to me just as certain to grow out of this division is this: unless the unscrupulous minority which controls the State Society is made up of brag and bluster, they must go on with the work. Their aggressive policy must extend to the County Societies. It is one thing, by the preponderating influence of three great county organizations, to be able to control the State Society; it will be another thing to invade each county medical society, and coerce them all into conformity to the new order of things. To make the "New Code" the medical law of the land they must do this. To allow each county medical society to exist quietly with the Code of the American Medical Association as a part of its organic law is to admit cowardice, defeat, and a cringing fear of the storm they have raised. To do less than this will make them the laughing-stock of the world, and an object of contempt of all right-thinking men. They cannot go back, the day of strife is yet before them, as they will find out, and they must meet it. For this, let us prepare, let us fore-arm, let us prepare here in this great central association, and make a home for those county medical societies that will resist coercion! Here they can come and find comfort and protection. We owe them this protection, and we shall do less than our duty if we neglect the opportunity.

Drs. C. G. Pomeroy, of Wayne Co., Austin Flint, Jr., and Gouley, of New York, Seymour, of Rensselaer Co., and G. W. Cooke, of Ulster Co., urged the adoption of the resolution.

DR. E. D. FERGUSON, of Troy, spoke for the preamble and resolution, and moved that they be adopted to-night, but that such adoption should be in force only in case the State Society shall fail on Tuesday evening to reënact the National Code, otherwise the action of to-night shall be void.

DR. M. W. TOWNSEND, of Genesee Co., moved that Dr. Flint's preamble and resolution be laid on the table until Wednesday. Lost by a tie vote.

DR. GILLIS, of Franklin Co., and DR. J. C. GREENE, of

Erie Co., thought action on the resolution should be deferred until after the vote had been taken in the State Society on the resolution to restore the National Code.

DR. D. GUERNSEY, of Dutchess Co., DR. GOULEY, of New York, and DR. DIDAMA, of Syracuse, advocated the resolution. No harm, Dr. Didama thought, could come from our organization to-night. We can go to the State Society, enter our protest against the unfair and clandestine action of 1882, and ask that the National Code be restored. If, by some unexpected impulse of good judgment and kindly feeling, our appeal shall be heeded, then this Association may be discontinued. But if the minority should persist in trampling upon our rights—as we all believe they may—then, if we are men respecting ourselves and deserving the respect of our constituents, we shall reassemble on Wednesday morning, and end the fruitless and disgraceful wrangle of the past two years by finishing the good work we have so well begun this evening.

The motion to lay on the table was renewed, and lost by a rising vote of twenty-one for tabling and thirty-four against.

DR. FLINT'S preamble and resolution, with the limitation as to the time of enforcement as provided in the resolution offered by Dr. Ferguson, were then adopted; the vote, on motion of Dr. Rochester, being declared unanimous.

THE OBJECTS OF THE NEW ASSOCIATION.

DR. T. B. REYNOLDS, of Saratoga Co., offered the following:

Resolved: That the objects of this Association shall be the cultivation and advancement of the science of medicine. Carried unanimously.

DR. GOULEY offered the following

PLAN OF ORGANIZATION.

Resolved: That the following plan of organization be adopted:

1st. To facilitate the transaction of business, such as the selection of committees, the annual election of officers and of new members, etc., the State shall be divided into five geographical districts, to be called respectively, the 1st, or Northern District; the 2d, or Eastern District; the 3d, or Central District; the 4th, or Western District; and the 5th, or Southern District.

These districts shall comprise the sixty counties of the State.

2d. A Nominating Committee shall be created, to consist of two members from each of the above-named districts—elected by the representatives of each district—and one appointed at large by the Chair. In all eleven members.

3d. The Nominating Committee shall name, subject to the approval of the Association, a President and four Vice-Presidents—these five officers to come one from each of the five districts—a Recording Secretary, a Corresponding Secretary, and a Treasurer.

In addition, said Committee shall name two members from each district, who, together with the titular officers and one member appointed at large by the President-elect, shall constitute the Council, which shall manage the affairs of the Association.

The Nominating Committee shall suggest the time and place for holding the next session of the Association.

4th. The Council shall complete the organization, prepare a constitution and by-laws, in accord with this plan, to be presented at the next meeting of the Association, and file articles incorporating the New York State Medical Association, and also County Associations, as branches of said New York State Medical Association. The Council shall also assist the President in securing scientific contributions.

5th. In case no meeting of this Association be held prior to May, 1884, the Council shall appoint delegates to the National Association and to State Societies.

6th. The Council shall fill such vacancies as may occur in its body during the current year, except in the office of President and Vice-President.

7th. The ten members of the Council shall constitute a quorum.

8th. The initiation fee shall be five dollars, and the annual dues three dollars.

9th. The code of ethics, which shall form an integral part of the by-laws of this Association, shall be as follows:

The same as that adopted by the American Medical Association.

10th. The Association shall hold annually one session, which shall last three days or more.

The above plan of organization was adopted unanimously.

THE MEMBERSHIP.

DR. FERGUSON moved that all physicians in the State of New York who are in good standing in the present County Societies, and who subscribe to the code of ethics of this Association, can become members thereof upon paying the initiation fee and signing the constitution and by-laws. Carried unanimously.

DR. ROCHESTER moved that all questions relating to the admission of new members, prior to the permanen organization, shall be decided by the Council. Carried unanimously.

NEW COUNTY ASSOCIATIONS.

DR. HYDE moved that, after the formation of new County Associations as branches of this Association, the members of said County Associations may become members of the State Association by paying the initiation fee and signing the constitution and by-laws. Carried unanimously.

TO VOTE TO REPEAL THE NEW CODE IN THE STATE SOCIETY.

DR. FERGUSON then reintroduced his resolution concerning the attendance at the session of the State Society on Tuesday evening for protest against the present code, and for the support of the National Code. Carried unanimously.

The convention adjourned at 11.30 P.M., to meet at 9 A.M., Wednesday, February 6th.

[As is well known, the motion in the State Society to repeal the New Code was lost on the following evening.]

WEDNESDAY, FEBRUARY 6TH. SECOND SESSION.

The Association met in adjourned session at 9 A.M. The minutes of the first meeting were read and approved.

THE NOMINATING COMMITTEE.

The members from the five districts then met in separate portions of the room, and, after consultation,

presented the following list of names as the Nominating Committee, Dr. Austin Flint, Sr., being appointed a member at large by the Chair.

1st District.—Dr. Ira H. Abell, Antwerp, Jefferson Co.; Dr. L. C. Dodge, Rouse's Point, Clinton Co.

2d District.—Dr. T. B. Reynolds, Saratoga Springs, Saratoga Co.; Dr. Thomas Wilson, Claverack, Columbia Co.

3d District.—Dr. A. D. Head, Syracuse, Onondaga Co.; Dr. Caleb Green, Homer, Cortland Co.

4th District.—Dr. Darwin Colvin, Clyde, Wayne Co.; Dr. Thos. F. Rochester, Buffalo, Erie Co.

5th District.—Dr. D. Guernsey, Amenia, Dutchess Co.; Dr. J. W. S. Gouley, New York City and Co.

The Nominating Committee then retired.

DR. H. O. JEWETT asked for information concerning

THE RELATION OF THE ASSOCIATION TO COUNTY SOCIETIES.

The subject was informally discussed, and no action at present was favored, though the formation of County organizations in affiliation with this Association was considered desirable, and that, at a proper time, such measures should be taken as might be necessary.

THE NEXT PLACE OF MEETING.

DR. FLINT, JR., tendered the hospitalities of New York City for the next meeting of the Association.

DR. C. S. WOOD, of New York Co., offered a resolution that the invitation of Dr. Flint be accepted. Carried.

An informal expression of opinion was then requested as to the proper time for the next meeting of the Association, and finally a poll was taken of those who had preference as to the time of such meeting, which resulted in a majority favoring the third Tuesday in November.

DR. FLINT, JR., then moved that the third Tuesday in November of this year be appointed as the time for the next meeting of the Association.

ELECTION OF OFFICERS.

The Report of the Nominating Committee was then presented.

President.—Dr. H. D. Didama, Onondaga Co., 3d District.

Vice-Presidents, 1st District.—Dr. J. M. Crawe, Jefferson Co.

2d District.—Dr. Tabor B. Reynolds, Saratoga Co.

4th District.—Dr. B. L. Hovey, Monroe Co.

5th District.—Dr. N. C. Husted, Westchester Co.

Recording Secretary.—Dr. Caleb Green, Cortland Co.

Corresponding Secretary.—Dr. E. D. Ferguson, Rensalaer Co.

Treasurer.—Dr. John H. Hinton, New York Co.

Councillors, 1st District.—Dr. John P. Gray, Oneida Co.; Dr. Conant Sawyer, Essex Co.

2d District.—Dr. J. W. Moore, Albany Co.; Dr. Thomas Wilson, Columbia Co.

3d District.—Dr. Frederick Hyde, Cortland Co.; Dr. Ely Van de Warker, Onondaga Co.

4th District.—Dr. E. M. Moore, Monroe Co.; Dr. M. W. Townsend, Genesee Co.

5th District.—Dr. E. R. Squibb, Kings Co.; Dr. A. Flint, Jr., New York Co.

DR. E. M. MOORE moved that the report of the Nominating Committee be accepted, and it was then adopted unanimously.

MEMBER OF THE COUNCIL AT LARGE.

DR. DIDAMA, after thanking the Association for the honor conferred, appointed Dr. J. W. S. Gouley as member of the Council at large.

NEW MEMBERS.

DR. FERGUSON moved that the Council be authorized to receive new members. Carried.

DR. VAN DE WARKER moved that a Committee of three be appointed to secure the coöperation of a medical journal in sympathy with the wishes and interests of this Association. Carried, and referred to the Council for the appointment of such committee.

DR. H. B. ALLEN moved that the Corresponding Secretary be directed to furnish blank applications for fellowship. Carried.

A meeting of the Council was directed to be called immediately after the adjournment of the Association.

One hundred and sixty-eight members signed the agreement of organization.

The Association then adjourned to meet in New York City on the third Tuesday in November, 1884.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, February 18, 1884.

THE PRESIDENT, WILLIAM DETMOLD, M.D., IN THE CHAIR.

DR. GEORGE L. PEABODY presented a specimen of

SARCOMA OF THE DURA MATER.

The patient from whom the specimen was taken, he said, had been a man seventy-two years of age, who had died on the 9th of January last in the New York Hospital. As the autopsy revealed a large tumor, which made a considerable depression on the external convolutions of the brain, it had been a matter of interest to find out the clinical history of the case. The man had always been a free liver, though he was not intemperate in his habits.

About 7 P.M. on the 8th of January he slipped and fell violently on the pavement; but immediately got up without assistance and walked to a neighboring barroom, where he sat down. In fifteen minutes, however, he became unconscious, and was brought to the hospital. It was noted on his admission that there was a hæmatoma of some size under the scalp, on the left side of the cranium, and that there was some œdema of the lower extremities. The pulse was that of compression, slow and full (sixty-eight to the minute), and the temperature normal. Before death, however, both the pulse and temperature were considerably raised. The autopsy was made five hours after death. Extensive meningeal hemorrhage was found, which resulted from the rupture of a meningeal vessel at the time of the patient's fall, and was probably the cause of the coma. In the left parietal region was the tumor, which was flat on the side towards the dura mater, but convex on the surface that pressed upon the cerebral hemisphere. The case, Dr. Peabody said, was interesting as offering a contribution to the subject of cerebral localization, although a negative one. There was a large tumor pressing upon the brain to such an extent that it had made a well-marked depression of its surface; but the seat of the growth was

not in the motor tract. The patient had never had any paralysis, epileptic or apoplectic seizures, or even any headache, and his friends had never seen any reason to suppose that he had anything the matter with his brain. The autopsy also showed a condition of diffuse nephritis.

Dr. Gouley said that, twenty years ago, he had made the autopsy in the case of a young lady who had a much larger tumor of the dura mater than this, which pressed upon both hemispheres. It was of about the size of his fist. He had known the patient for some time, and she had never had any convulsions or any other symptoms referable to trouble in the brain; but the shape of her head was very peculiar, long and pointed like a sugar-loaf. When he had had the case under observation for about a year, the young lady died of perforation of the appendix vermiformis, and the autopsy revealed the presence of the tumor described. He had reported the case in the first number of the *New York Medical Journal*, in 1864, when it was published with a plate.

A SPECIMEN OF STENOSIS OF THE PULMONARY ARTERY.

Dr. Austin Flint, Sr., then presented a specimen, which he said was of rare interest, and which was at his disposal only for this evening. It was a heart presenting well-marked stenosis of the entrance to the pulmonary artery, in consequence of which the normal condition of the ventricles was exactly reversed, the left ventricle being much atrophied, and the right greatly hypertrophied. He believed the stenosis to have been congenital. The subject was a lad, nineteen years of age, who was admitted to the hospital for some trouble about his toe-nail. As he was seen on one occasion to have severe palpitation of the heart, an examination of the organ was made, when it was found that there was a loud systolic murmur present. It was supposed to be a mitral regurgitant murmur, although the situation of its maximum intensity was a little higher than ordinary. In reality the sound was produced by the sigmoid valves. The cause of death was scarlet fever. The patient had never had any cyanosis or other symptom indicating heart-trouble.

Dr. Janeway mentioned a case of stenosis of the pulmonary artery which he had seen several years ago. In this instance there was very marked cyanosis, and the patient finally died of phthisis. It was a remarkable case as showing the greatest amount of destruction and consolidation of lung tissue which he had ever seen compatible with the preservation of life, the autopsy revealing that only a portion of the lower lobe of one lung was in a serviceable condition. The cyanosis in this case seemed to be advantageous rather than otherwise.

Dr. Detmold then made some remarks on

THE DIAGNOSIS AND TREATMENT OF SYPHILIS.

All were aware of the difficulty sometimes met with in deciding whether certain symptoms seen in a patient were of a specific character or not, especially in cases in which the patient was unwilling to tell his true history or was really ignorant of his ever having had syphilis. There was one sign which he considered pathognomonic, although the text-books did not seem to attach much importance to it, and it had never yet deceived him. It was well known that certain diseases had special predilections for special tissues and organs. Thus, scrofula was particularly liable to attack bones with a large amount of cancellated structure, like the scapula and head and neck of the femur. Syphilis, on the other hand, selected an entirely different class of bones for its seat. It was the body of the bones which it attacked, and especially of those bones not covered by large masses of fibrous or muscular tissues. Of all other parts, it preferred the anterior aspect of the tibia; but was also very liable to attack the surface of the ulna, the sternum, the bones of the skull, and the bones of the nose. Whenever secondary syphilis gave rise to periostitis, it would be found that œdema over the part invariably resulted, and, moreover, that this œdema was permanent.

The pathognomonic sign of which he had spoken, was this permanent œdema over the anterior surface of the tibia. In no case, in all his experience, had he ever seen it entirely disappear, and hence its great diagnostic value.

He did not, of course, mean to say that œdema of this region was always of specific origin, as it was liable to result from injuries of various sorts; but when it was found on both tibiæ, and when no local cause could be discovered for it, there could be no reasonable doubt that it was due to syphilis. When periostitis had resulted in the formation of nodes, if seen in time, he was sometimes in the habit of denuding the periosteum subcutaneously, when the growth would disappear. A number of surgeons had confirmed by their observations his opinion in regard to the diagnostic value of permanent œdema on the tibia.

His treatment of syphilis was somewhat different, he continued, from that ordinarily employed. Some years ago a gentleman suffering from the disease had been under his care, who presented such an intolerance to mercury, as usually prescribed, that the treatment always had to be interrupted, and it seemed extremely difficult to secure a permanent cure. While in the army in Germany, Dr. Detmold had been familiar with the treatment by mercurial inunction carried to the point of salivation, which was then in vogue there; but this plan was obviously inapplicable in this case. He, therefore, made trial of the external use of a solution of bichloride of mercury, two grains to the ounce, which he instructed the patient to rub upon each of his extremities successively, using half an ounce of the solution at each application, night and morning.

The result was far beyond his anticipations, and since then he had constantly resorted to this plan of treatment, to the exclusion of all others. The application was perfectly clean, without inconvenience, without local effect upon the skin, never produced salivation, and, above all, was perfectly successful. He had thought in a few instances that he had observed griping pains in the stomach result from it after a time, and he had also occasionally noticed a slight discoloration of the finger-nails, which he was disposed to attribute to the friction in rubbing. He had, however, never observed the toe-nails to see whether they were discolored also. This treatment he preferred to any other with which he was acquainted, and it had now been tried successfully in various hospitals. Only a few days ago Dr. Leale had assured him of the great success which he had met with in carrying it out, and he trusted that any of those present who had not given it a trial, would do this whenever occasion should offer.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 25th, 1884.

THE PRESIDENT, S. OAKLEY VAN DER POEL, M.D., IN THE CHAIR.

DR. WM. S. HALSTED read a paper on

THE EFFECTS OF ADDUCTION AND ABDUCTION ON THE LENGTH OF THE LIMB, IN FRACTURES OF THE NECK OF THE FEMUR,

in which he claimed that, together with the measured length of the limb in such fractures, its position, as regards adduction or abduction, should be carefully noted; and that all statistics of these fractures were worthless which did not take into consideration the amount of adduction or abduction present. He had made a careful research in regard to the matter, and illustrated the points taken in the paper by a series of geometrical diagrams on the black-board.

DR. A. B. JUDSON said that while the paper was a scholarly attempt to apply an exact science to a problem in surgery, he was not sure that the point claimed was one of great practical importance. It seemed to him that the acetabulum was such a short distance from the head of the femur and the vertical line passing through the malleolus, that he doubted whether any great amount of measured shortening could be obtained by adduction or abduction.

DR. JOHN A. WYETH thought that the methods of measurement were all practically very inexact, and this was due in a great measure to the normal differences in the length of the femur, and of the entire limb on the two sides. This normal difference might even be as great as an inch, and it was a very rare thing to find the two limbs of exactly the same length. This consideration, in his opinion, did away with the possibility of making any satisfactory attempt to obtain accurate measurements. The difference was not great one way or the other in intracapsular fractures of the femur, and he thought it was not practicable to apply exactness of measurement to such accidental lesions.

DR. HALSTED said, in regard to Dr. Judson's idea, that the angle was too obtuse to be of any practical importance, and that he believed he was mistaken. In the case in Bellevue Hospital, which led him to make a special study of this subject, the patient stated that he had never had the slightest limp before. The apparent shortening was two inches, while the measured length of the injured limb was one-eighth of an inch greater than that of the other, and hence it was thought that there could be no fracture. He decided, however, that there was an intracapsular fracture. There were three things that he took into consideration: First, the adduction, making the limb longer; second, the adduction of the other limb, which was paralyzed, making it shorter; and, third, the fact that one limb might be naturally longer than the other. His demonstration had a direct bearing, he thought, on both diagnosis and treatment. With an adducted, impacted fracture, with apparent shortening, the patient was sure to limp.

NEW INVENTIONS.

NEW TRIAL-FRAMES.

BY L. WEBSTER FOX, M.D.,

OPHTHALMIC AND AURAL SURGEON TO THE GERMANTOWN HOSPITAL; CLINICAL ASSISTANT, EYE DEPARTMENT, JEFFERSON MEDICAL COLLEGE HOSPITAL, ETC.

THIS trial-frame for the adjustment of glasses, Fig. 1, consists of a horizontal bar upon which moves the frames for holding the trial lenses; these frames are moved by a screw (after the lunette du Dr. Armaignac) which adjusts the pupillary distance and registers the same.

The nose-rest is held in position by a screw, and can be elevated or lowered at will. That part of the frame for holding the lenses is divided into three spaces of sufficient width to allow the cylinder lenses to be rotated.

FIG. 1.

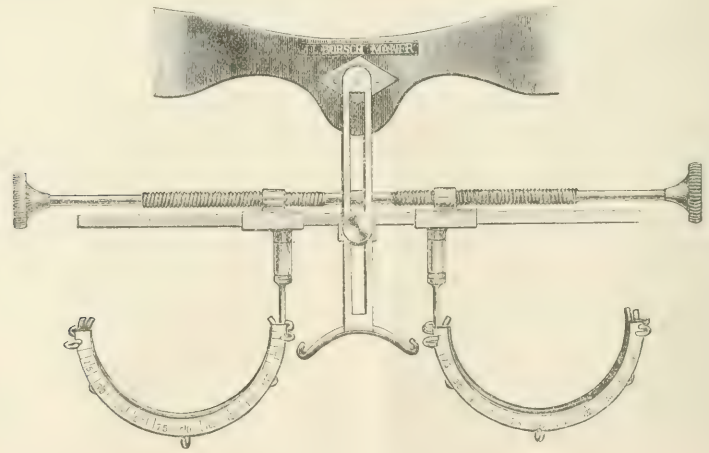
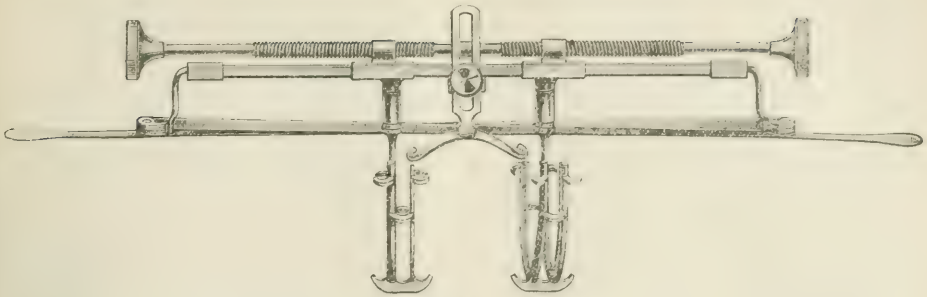


Fig. 2.



On the plate are engraved numbers indicating the axis of the cylinder

The frames holding the lenses are held in position by a socket-joint, which allows of their being turned forward on their axes. This obviates the necessity of either removing the trial lenses or elevating the frames, thereby exposing both eyes, when it is desirable to make a comparison test. The frames are held in position by a head-band or temples. The temples are fastened to the horizontal bar (see Fig. 2). Fastened to the temples are triangular-shaped wings, which prevent reflected light from falling on the posterior part of the lenses.

The woodcut drawings represent the exact size of the trial-frames. They are made out of a material combining lightness with strength and durability.

Fig. 2 represents the trial-frames with temples attached and the frames for holding the lenses turned forward.

John L. Borsch, Optician, 221 South Ninth Street, is the maker.

1506 Walnut Street

CORRESPONDENCE.

GEOGRAPHICAL DISTRIBUTION OF URINARY CALCULUS.

To the Editor of The Medical News.

Sir: Please allow me to correct a statement made by Dr. Keyes, of New York, in an article on "The Geographical Distribution of Urinary Calculus," etc., which appears in The News of March 1st. He states that "Mr. Dudgeon, of Pekin, who succeeded Kerr in China," etc. Dr. D. did not succeed Dr. Kerr, as I was Kerr's successor myself in the Native Hospital at Canton, and whilst there operated on some two hundred or more cases of lithotomy. In an article giving statistics of my first one hundred and forty cases, published in the "Medical Reports of the Chinese Customs," I give several reasons for the frequency of this disease in the Southern Province of China, all of which combine to produce it—amongst them the hard water used by the natives. Just at Canton, the water is soft; but had Dr. Dudgeon penetrated as far into the interior of the country as Dr. Kerr and I have done, I think he would have found the water which rushes down between those lime hills, hard. I do not pretend to say that this is the only reason why the natives of this locality have stone, but it is one of them, and, I am inclined to think, the principal one.

Very respectfully,

F. Carrow, M.D.

Wilmington, Del., March 4, 1884.

COMPENSATION FOR EXPERT TESTIMONY.

To the Editor of The Medical News.

Sir: In your editorial of March 1st, on "Compulsory Expert Testimony without Remuneration," you state that Iowa alone has secured justice to the expert through legislation, which, while technically correct, does not adequately represent the present status. The Supreme Court of Indiana, in 1878, declared the right of the expert to compensation. In the same year, Judge Clark, in the "State of Texas *vs.* Jasper Weathers," maintained the same right. In 1877 a Circuit Court of West Virginia did the same, while the Supreme Court of Alabama took the opposite view, which probably accounts for the action of the Greene County (Alabama) Medical Society. In Ohio, the Common Pleas Court of Madison County in April, 1882, of Franklin County in June, 1883, and doubtless others, have established the precedent of awarding experts reasonable compensation. It is a question whether judicial decisions are not a better security for justice in this matter than legislative acts.

While writing on legal topics, I would also call your attention to an error in the last sentence of the Cincinnati correspondence in the same number. The law already is compulsory, declaring that the superintendent of an infirmary, etc., *shall* deliver the body on the written requisition of a professor of anatomy. There has been no difficulty in getting a supply of material in Columbus since the passage of the Anatomy Act, but as long as Cincinnati maintains *five or six* medical colleges, no law is likely to give them a full supply.

Respectfully yours,

Henry G. Landis, M.D.

Columbus, Ohio, March 1, 1884.

NEWS ITEMS.

BERLIN.

(*From our Special Correspondent.*)

The Koch Mission, Fifth Report.—Following the preliminary and less interesting communications the

fifth report of the Cholera Commission is just received, and proves to be of the greatest importance. As THE MEDICAL NEWS will give a complete translation of it, I only send you the concluding passage, which might destroy a good many preconceived opinions still existing in America, and therefore ought to be published as early as possible. It runs as follows:

"I learn from the medical journals, that the French Commissioners, who had been sent to Egypt for the exploration of the cholera, declare in the report given by them, that they have gained different results from those communicated by myself, having found organisms in the blood, which, according to their view, are peculiar to cholera. Since hereafter it might give the impression that the researches of the German Commission were being prosecuted in the wrong direction, I think it necessary to explain to your Excellency my opinion concerning the above statements.

"In the blood of the healthy man—besides red and white blood-corpuscles—there exist in varying quantity small, roundish, pale elements, the so-called blood-plates (Blutplättchen). In some febrile diseases, typhus fever and pneumonia for instance, these elements are greatly multiplied, and in consequence of their resemblance to micro-organisms have been repeatedly taken for bacteria. In the blood of individuals suffering from cholera, and of those who have died from that disease, they are likewise almost regularly multiplied, as we were able to verify in the cases of cholera examined. This fact, after all, is not a new one, since it has been already mentioned by former examiners. D. D. Cunningham, for instance, as early as 1872, in his *Microscopical and Physiological Researches into the Nature of the Agent Producing Cholera*, has given a very good figure of these formed elements of the choleraic blood.

"Now, since even the most approved methods fail to recognize in the cholera blood any other elements similar to bacteria, and since the description given by the French Commissioners in every respect corresponds with the above-mentioned 'blood-plates,'[1] I cannot but conclude that the French Commission, falling into the same error as other examiners before, has taken the 'blutplättchen' for specific organisms. Any etiological connection with cholera cannot be ascribed to these blood-plates, since, as I have already mentioned, these elements are also met with in the blood of healthy individuals, and of persons suffering from other diseases."

Cutting criticisms have never been expressed with more gentleness and directness.

As for the rest of the report, its statements again merely confirm the observations made in Egypt. Pure cultures of the bacilli constantly met with in the intestinal walls and in the stools of uncomplicated cases of cholera, have proved that these bacilli are gifted with constant qualities characterizing their shape and their mode of growing in nourishing gelatine, whilst these characteristic elements were invariably absent in other diseases. The choleraic material was taken from nine post-mortem examinations and eight clinical cases.

In addition, interesting remarks are made on the influence of the new well-water supply in Calcutta on the decrease of the cholera mortality. The water was found to be of a very good quality. Hearty thanks are given to the British authorities for the lively interest shown in the work of the Commission, and the active support rendered in that city.

Everybody who had the honor of Dr. R. Koch's personal acquaintance, knew full well from the beginning that no vague theoretical suggestions would emanate from him, and the fifth report of the German Commission cannot fail to persuade even the most sceptical minds of the entire reliance to be placed on the statements which he has made.

DR. KOCH, in his fifth report, dated Calcutta, January 7th, and just published in the *Deutsche med. Wochenschrift*, Feb. 14, 1884, states that between December 16th and January 7th, nine autopsies were made, and material has also been obtained from eight cholera patients. The cases succeeded each other in tolerably regular order, so that there was ample time for investigating each. Several cases which, after a short and entirely uncomplicated course, proved fatal, were examined very soon after death.

Microscopical examination showed, in all these cases, the presence of the same bacilli in the intestines as were found in Egypt. In the report of September 17, 1883, the suggestion was thrown out that possibly these bacilli might be, as are so many other bacteria, regular parasites of the human intestine, and not peculiar to the cholera patient, and at that time distinguishing characteristics were wanting. This difficulty, however, has now been fortunately removed. Attempts to isolate the cholera bacilli and to make cultures have succeeded. Close observation of these cultures has brought out some very characteristic properties as to their form and their growth in gelatine, by which they can be recognized with certainty from other bacilli. It now remains to be determined whether these bacilli may be generally found in the intestine, or whether they are exclusively confined to the intestines of cholera patients.

In the first place, by means of gelatine cultures, the bacilli were demonstrated in the dejections of cholera patients and in the contents of the intestines of cholera corpses, and this was the case in all the observed cases; while in the contents of the intestines of bodies dead from other diseases, the bacilli of the choleraic intestines were not found. Up to this time eight bodies of persons dead of pneumonia, dysentery, phthisis, and kidney disease have been examined. Furthermore, the intestinal contents of different animals, and other substances rich in bacteria, were examined, but no bacteria resembling cholera bacilli were found. If these bacilli with specific properties are entirely confined to the cholera process, then there will scarcely be a doubt as to the relation between this process and the appearance of these bacteria, even if attempts to reproduce the disease in animals have not succeeded. Still, recent experiments of this kind have been so far satisfactory that we have reason to expect further favorable results.

The Commission has also studied, as far as possible, the relations of cholera to the City of Calcutta. It is only in the cities outside of India, which have been affected with cholera at long intervals, that the influence exerted on cholera by sanitary improvements, such as

[1] The readers of THE MEDICAL NEWS have been made well acquainted with these blood-plates by the excellent article of Prof. Osler, in the last number of the year 1883, page 701.

good drinking water, drainage, and the like cannot be determined with certainty. On that account every regulation should be carried out in the cities which, like Calcutta, have a considerable yearly cholora mortality. Previous to 1870, the average yearly mortality of Calcutta from cholera was 10.1 per thousand. Since 1870 it has fallen to 3, or more than threefold. It is to the improvement of the sanitary condition, and the bettering of the water supply especially, that these cities must hereafter look for an escape from cholera. The Commission has, to this end, inspected the water works and the canals of the city. They have also made a number of analyses of the river water, both before and after filtration in the water works of Pultah, and of the drinking water in the city.

United States Board of Health.—At the recent meeting of the House Committee on Public Health, a substitute for the National Board of Health's bill, "For the prevention of the introduction and spread of contagious and infectious diseases," was presented. The substitute provides for the formation of a United States Board of Health, composed of the Surgeon-Generals of the Army, Navy, and Marine-Hospital Service, gives the quarantine work to the Treasury Department, and the investigation into sanitary matters to the Navy, through its Museum of Hygiene.

The Surgeon-General of the Navy.—The President, on the recommendation of the Secretary of the Navy, has appointed Surgeon Gunnell to succeed Surgeon-General Wales as Surgeon-General and Chief of the Bureau of Medicine and Surgery of the Navy.

Surgeons J. S. Billings and J. S. Brown, U. S. A., have been detailed to attend the International Health Exhibition which meets at South Kensington in May next, and to represent the Department at the International Medical Congress which will convene at Copenhagen in August next.

The Investigation into Adulterated Dairy Products is being pressed upon the attention of Congress, and the House Committee on Public Health has already given the subject some attention. A resolution has been referred to it which will open up the whole subject of oleomargarine, suine, butterine, and other imitations of butter.

Yellow Fever at Havana.—There were six deaths from yellow fever at Havana during the week ending February 23, 1884.

Sanitary Council of the Mississippi Valley.—The Sixth Annual Meeting of the Sanitary Council of the Mississippi Valley will be held in the city of Memphis, Tenn., on Wednesday, March 19, 1884.

A Case of Mistaken Sex.—The case of mistaken sex reported by Dr. Wm. P. McGuire, of Winchester, Va., in The Medical News of February 16th, has attracted widespread interest. We learn that since the publication of the article, the party has married, and he reports to Dr. McGuire that he has regular sexual intercourse with ejaculation of semen, which, owing to the position of the external opening of the urethra, does not fall into the vagina. With this exception, both parties maintain that the act of coition is complete.

Tattooed Woman Bearing a Tattooed Child.—A paragraph has been going the rounds of the newspapers for the last few days, to the effect that a tattooed woman who has been exhibited in most of the large cities, had given birth to an infant bearing marks on its body similar to those on its mother's. We are informed by Dr. A. T. Shertzer, of Baltimore, who attended the woman in her confinement, that there is no truth in the statement, and that the infant bears no unusual marks.

The American Journal of Ophthalmology.—Dr. Adolf Alt, of St. Louis, Mo., announces the publication of a monthly journal under this title, the first number of which will be issued on April 15, 1884.

Commencement of the University of Louisville.—At the Annual Commencement, held on Thursday, February 28th, the degree of Doctor in Medicine was conferred upon eighty-four candidates. Prof. J. A. Octerlony delivered the Valedictory Address.

College of Physicians and Surgeons, Baltimore.—At the Twelfth Annual Commencement of the College of Physicians and Surgeons, held on March 4th, the degree of Doctor in Medicine was conferred upon one hundred and twenty-seven candidates.

The New York Post-Graduate Medical School and Hospital.—The new building occupied by the above school and hospital, has a frontage of ninety-five feet on East Twentieth Street, and is four stories high above the basement. In the latter are situated the drug department and the general waiting-room for patients, together with a number of rooms used for dispensary purposes.

On the first floor are a large and well-lighted lecture-room and examining rooms for the several departments, and also the office and a handsome and well-equipped reading-room.

On the second floor are class-rooms assigned to the different chairs, and in which practical courses are given to classes limited to a certain number of students. Some of these rooms are fitted up with costly apparatus and appliances.

The third floor is devoted entirely to hospital purposes.

The fourth floor is used partly for hospital purposes and partly for the accommodation of the employés. On this floor there are also two rooms fitted up by Prof. Roberts for photographic purposes, and furnished with a skylight, etc. For greater convenience as to light, the pathological laboratory is also on this floor.

In a detached building in the rear, are the mortuary and the rooms for practical anatomy and operations on the cadaver. Accessible by a separate entrance is an accident ward for the reception of emergency cases.

Taken as a whole, the building is thoroughly adapted for the purposes to which it is applied. The location is central as regards the principal hospitals and dispensaries, and is accessible from all parts of the city by means of elevated and surface railroads.

The New York Skin and Cancer Hospital.—The position made vacant by the resignation of Dr. Hunter

has been filled by the appointment of Dr. J. E. Janvrin, with Dr. J. R. Goffe as his assistant.

INTERNATIONAL OTOLOGICAL CONGRESS.—The next International Otological Congress will meet at Basle, on September 1st and continue until the 4th. A detailed programme will be issued about June 1st. Communications should be addressed to M. Le Dr. Burckhardt-Mérion, at Basle.

THIRD CONGRESS OF INTERNAL MEDICINE OF BERLIN.—This Congress will be held on April 21st to 24th, under the presidency of CH. FRERICHS. The following are the subjects for discussion: *First day*, Pneumonia. *Second day*, Poliomyelitis and Neuritis. *Third day*, Nervous Dyspepsia. The following communications have been announced: Hermann Weber, Hygiene of English Schools, considered especially with Regard to Contagious Diseases. Rosenthal, The Reflexes. Goltz, Localization of Cerebral Functions. Pfeiffer, Vaccination. Siegen, Diabetes. Rossbach, Treatment of Infectious Diseases; New Applications of Naphthaline.

PROFESSOR TARNIER.—By a decree of February 5, 1884, M. TARNIER has been appointed Professor of Obstetrics and Diseases of Women and Children, in the Faculté de Médecine of Paris.

PROFESSOR FRERICHS.—The Russian Government has conferred on Professor Frerichs the Grand Cordon of S. Stanilaus, in recognition of his services in connection with the education of Russian students in the Universities of Breslau and Berlin.

SIR SPENCER WELLS IN ITALY.—Sir Spencer Wells, who has been making a short stay in Italy, has been received by his Italian confrères in Rome and Naples in a very cordial and gratifying manner. At Naples he was publicly addressed by Professors Schrön and D'Antona, and by the students.

YELLOW FEVER AT RIO JANEIRO.—The Consul General at Rio Janeiro has sent to the State Department, a tabular statement showing the number of deaths at that place from yellow fever, from the year 1850 to 1883 inclusive. It is too elaborate to reproduce here, but an examination of the table indicates that the disease was more fatal in the following years: 1850, 4160 deaths; 1852, 1943 deaths; 1857, 1425 deaths; 1860, 1249 deaths; 1870, 1117 deaths; 1873, 3467 deaths; 1875, 1291 deaths; 1876, 3317 deaths; 1880, 1573 deaths, and 1883, 1494 deaths. No deaths occurred from the disease in 1855, 1856, 1858, or from 1863 to 1869.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending February 23, 1884, indicate that rheumatism, diarrhœa, intermittent fever, influenza, pneumonia, whooping-cough, and bronchitis have increased, and that inflammation of the bowels and measles have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending February 23d, and since, at ten places, scarlet fever at twenty-three places, and measles at ten places. One death from trichiniasis was reported at Niles Feb. 22d.

OBITUARY RECORD.—DR. ROBERT THOMAS COLEMAN died in Richmond, Virginia, on March 4th, æt. 53 years. He graduated in Medicine from the University of Virginia in 1850, and in 1851 received the degree of M.D. from the Jefferson Medical College, Philadelphia. He then entered the Philadelphia Hospital as an interne, where he remained for two years, and returned to Richmond in 1854. In the autumn of this year, when the hospital was converted into a school for clinical instruction, the Board elected him lecturer upon clinical medicine. This honor was declined, and he remained in Richmond until the outbreak of the war. After entering the Confederate Army, he was rapidly promoted to the grade of Brigade-Surgeon, and was made Chief Surgeon of the Stonewall Division, when that body was organized. He was twice temporarily detached from his division to act as President of the Commission of Inspection, being in this position second only to the Secretary of War. In 1865 he was elected Professor of Obstetrics in the Medical College of Virginia, which position he held until his death.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 26 TO MARCH 3, 1884.

BAILY, J. C., *Major and Surgeon.*—Granted leave of absence for one month, to take effect on or about March 1, 1884, with permission to apply to the Adjutant General of the Army, through Division Headquarters, for an extension of three months.—*S. O. 24, Headquarters Department of Texas*, February 26, 1884.

BENHAM, R. B., *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Fort A. Lincoln, D. T., and ordered to Fort Sisseton, D. T., for duty.—*Par. 1, S. O. 22, Headquarters Department of Dakota*, February 26, 1884.

PHILLIPS, JOHN L., *First Lieutenant and Assistant Surgeon.*—Assigned to temporary duty at Fort Warren, Massachusetts.—*Par. 2, S. O. 39, Headquarters Department of the East*, February 28, 1884.

FISHER, WALTER W. P., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at the Presidio of San Francisco, Cal., from 18th inst.

POLHEMUS, A. S., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort Winfield Scott, Cal., from 18th inst.—*S. O. 23, Par. 1 and 2, Headquarters Department of California*, February 21, 1884.

DIETZ, WILLIAM D., *First Lieutenant and Assistant Surgeon.*—Assigned to temporary duty at U. S. Military Academy at West Point, N. Y.

PHILLIPS, JOHN L., *First Lieutenant and Assistant Surgeon.*—Assigned to temporary duty in Department of the East.

MEARNS, EDGAR A., *First Lieutenant and Assistant Surgeon.*—Assigned to duty in Department of Arizona.

KNEEDLER, WILLIAM L., *First Lieutenant and Assistant Surgeon.*—Assigned to duty in Department of Dakota.

BLACK, CHARLES S., *First Lieutenant and Assistant Surgeon.*—Assigned to duty in Department of Texas.—*S. O. 46, Par. 1, A. G. O.*, February 25, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

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VOL. XLIV. SATURDAY, MARCH 15, 1884. NO. 11.

ORIGINAL LECTURES.

ANÆMIA AND ITS RELATIONS TO THE SEXUAL ORGANS.

A Clinical Lecture delivered at the Long Island College Hospital.

BY ALEXANDER J. C. SKENE, M.D.,

PROFESSOR OF GYNECOLOGY, AND SURGEON IN THE LONG ISLAND COLLEGE HOSPITAL.

(Reported by Edward Develin, M.D.)

GENTLEMEN: To-day I call your attention to the subject of anæmia, the relation it bears to the various derangements of menstruation, and the abnormal conditions of the female sexual organization.

Case I.—The first patient, which I here present to you, is twenty years of age. She brings with her, almost, the diagnosis written in her personal appearance. There is an exceedingly interesting chapter in medicine classed under the head of the physiognomy of disease. It is quite surprising how any one, who has taken the time and trouble to acquire the faculty of reading its pages, can detect the different symptoms of disease when looking at the patient. Now, at a glance I see that for one of her age she is undersized, that there has been a general arrest of development to a certain extent; one, however, may be very complete in all proportions, the organization may be as perfectly well developed in those who are of undersize as those who are of medium size; so that the fact of being below the average size does not necessitate lack of power or endurance. We have only to call to mind such men as Napoleon in confirmation of this statement. Therefore, if small stature exist alone, it stands for nothing. But this patient has the physiognomy of disease, and when I tell you she is anæmic, you will doubtless have anticipated the statement. But it is not enough to look at a pale face to base the diagnosis of anæmia upon, because we sometimes have the capillary circulation deficient, and although the patient may look pale and almost waxy, there may be no anæmia present. It may be more a defect of capillary circulation in the cheeks. But there is one point that is almost always infallible, and that is, pallor of the mucous membranes. When we find these pale, we have the physiognomy of disease. I find here the conjunctiva on both sides is perfectly anæmic, the tongue has that peculiar appearance, and so have the lips. We have here all the well-marked symptoms of anæmia; the pulse is extremely anæmic, in fact, she has to some extent the physiognomy of chlorosis. It is, however, necessary to have more than anæmia to have a chlorotic diathesis. This patient also has the peculiar color of hair that occurs in this temperament of females. She has not as much adipose tissue as is usual, but still she is not emaciated. On examination, I distinguish the bruit or murmur of anæmia which occurs with the first sound of the heart, giving us the most marked evidences of anæmia.

Next in order comes the question, What is the cause of this condition? Is it congenital? It may be so. I have seen plenty of chlorotic children. The question is, Is this entirely congenital? if I may be pardoned the term. Is it natural to her, or is it acquired? I find that she has a small circulatory apparatus; in chlorotic patients we have the small heart and bloodvessels almost always connected with an imperfectly developed sexual system; the mammary glands, however, are generally well developed. Such cases we often find with a malformation of the uterus, such as flexion or an infantile uterus; consequently, we have amenorrhœa, or dysmenorrhœa, with all the derangements of the sexual organs which arise from this imperfect development.

This patient informs me she has always been pale; she commenced to menstruate when she was sixteen; has always suffered great pain during menstruation, so much so that she is compelled to keep to her bed, the flow lasting but three days. Her menstruations again, we find, have been very irregular, sometimes five weeks intervening, and on one occasion seven months; always going beyond her time; has never fallen short. The pain, she states, commences a day or so before the flow begins, but as soon as this commences the pain is somewhat relieved.

This is almost a typical case of chlorosis, although there are some points to which I shall call your attention, and which might be better marked. In this case it is not necessary to make a physical exploration of the sexual organs, although in case we fail to relieve by therapeutic measures, then we will examine for the local cause of this dysmenorrhea. I shall, however, venture to give you the physical signs usually found in a case of this kind. You would find that the uterus does not measure, in its long diameter, two inches; in the next place, the vaginal portion of the cervix is not larger around than my little finger; the measurement of the uterus from before backward is even less than an inch, and is flexed either backward or forward. If this uterus were removed from the body, and held by the end of the cervix, between the thumb and finger, it would fall over; a normal uterus will, to use the expression, stand alone, when removed from the body. The ovaries also may be illy defined, but that is a question; the probability, however, is that they are small. If the ovaries be well developed, it is surprising how they will insist upon the uterus performing its functions to the greatest possible extent of its power; we thus find that the menstruation may be conducted in a proper manner though the uterus be undersized. In the case before you, the menstruations are irregular, the time intervening being abnormally long.

The question is, What can we do? Not much at the age of twenty; had we seen her earlier, we could have secured more complete development of the entire organization; we can now only try to overcome the consequences, and put her on the most nutritious diet and tonic treatment.

I have just asked her the question, if she works in to-

bacco? and her reply was, yes. I mention this because she has that peculiar appearance around the nails of the fingers which is observed in those who are employed in this manner. I cannot explain the character of this appearance, but I have noticed the strong tendency of this nicotine poisoning to produce most marked anæmia.

In the chlorotic patient there is a tendency to the development of a markedly profound anæmia, owing to the fact that the blood-making power of such an organization is defective. So this little girl starting out in life with an imperfect organization, has suffered very much from her conditions of life, especially her occupation in the tobacco factory. And so she is more anæmic now than she has been at any time in the past. We can, however, improve all this by general tonic treatment, including the chalybeates, and bring her up to the highest standard of health possible with such an organization. This will be the extent of our ability in this case.

Case II.—This patient I have presented to you at a previous clinic; she comes here to report progress. She is eighteen years of age; her catamenia occurred two years ago; she then menstruated regularly for five successive months, after which time the menses ceased, and did not return for one year and seven months. She came under our care delicate and anæmic; it was then pronounced to be a case of amenorrhœa, due to general debility and anæmia. Acting upon that principle, she was placed upon restorative treatment; as you observe, the tongue is now perfectly clean, and, as I have just stated, she menstruated one week ago for the first time in nineteen months.

This is a very satisfactory case, as it illustrates what we so frequently see, viz., that these cases of amenorrhœa due to general debility and anæmia, will respond to treatment remarkably well, if you adopt the proper course, bearing in mind that the cause of the amenorrhea is the depressed condition of the general system. Such cases as these when properly and effectively treated, give you a reputation in your profession; to be able to restore the glow of health and color to the cheeks and lips, and restore the lost function of the sexual organs, is gratifying alike to patient and physician.

Case III.—This young lady is twenty-four years of age, and was born in Nova Scotia. She first menstruated when seventeen years old, the periods being at first from two to three months between; menstruation is, however, now regular, lasting for three days. She comes here complaining of pain in the lower portion of the back; this, however, is not constant, and may be brought about by stooping or lifting. She does not always have this pain during menstruation; the bowels are now regular, although at one time she suffered from constipation.

The question to decide is, whether there is any special trouble with the pelvic organs which gives rise to the pain of which she complains. I hardly think there is anything which especially calls for local treatment. I think, however, we can build up her general health, and by this means relieve her sacral pains, which are almost always due to disease of the pelvic organs; but not so in this case. Now here is a case which might deceive you if you were not on your guard; you notice that she has a particularly healthy color; the capillary circulation in her cheeks is remarkably active; she is, however, not strong or plethoric; her pulse is weak; she has no more strength than the little pale patient you have just seen.

Another point of interest is that she did not menstruate until she was seventeen years of age; but then we must remember that she was born in a colder climate than ours, so that this function was not, under the circumstances, abnormally retarded. The facts in her history show that her trouble is general, not local, hence we shall let her sexual organs alone, and build up her general health.

Case IV.—This patient you will doubtless remember having seen at one of our previous clinics. She then stated that she was seventeen years of age and had not yet menstruated. After running over her case, noting her size and general lack of development, we came to the conclusion that, though old enough, she was not, however, developed sufficiently to menstruate: that her conditions of life had been such as to retard her menstruation. Therefore her amenorrhœa was conservative. She did not menstruate, simply because she was not able to do so. I dwelt at some length upon how important it was to ascertain the cause giving rise to this amenorrhœa; whether it was due to malformation, arrest of development, either general or local, or an impaired condition of health. In this case we decided that it was due to her general lack of development, and we therefore directed our attention to her general organization, leaving out entirely her pelvic organs, putting her upon constitutional treatment only.

Dr. Cushing, under whose observation she has been, then placed her upon tonic treatment, and has the satisfaction of knowing that she menstruated for the first time just three weeks ago. The tongue and lips, you will here observe, are of a more healthy color, while there appears the glow of increasing health in her cheeks. She has also some warmth now in the hands, which before were cold and damp. The treatment here has been faithfully followed out, and, as you can all perceive, with the most satisfactory results.

Case V.—This young girl is twenty years of age; she informs me that she commenced menstruating when fifteen years of age; she has always been irregular in her menstruations, going from four to eight weeks. During this time she has frequently suffered from a profuse leucorrhœal discharge; this, however, has been relieved by the hot-water douche. The bowels are also habitually constipated. She comes here to-day complaining of severe pain, mostly in the left iliac region, this pain commencing about a week before the menstrual flow and continuing for a day or two after the flow has ceased. A peculiarity of the pain is that it is not intermittent, as the pain of dysmenorrhœa often is. Then, again, the pain is not located in the region of the uterus. Keep this point in mind. This pain has gradually been getting worse with each succeeding menstruation. The patient has but little appetite, and is somewhat anæmic, although she has some color at present; this, however, is only temporary; her pulse is not strong, but still she is not chlorotic. She also complains of pain in the region of the stomach, which is increased upon eating.

Now from the occupation of this girl, which is that of a milliner, we might expect such a condition as we have here, resulting from the constant stoop of the body while

at her work, which retards the portal circulation and keeps the pelvic organs engorged. There are also indigestion and constipation, which arise from these sedentary habits. Now this dysmenorrhea is what I wish you specially to remember, because it is not uterine. I presume her uterus is not at fault, although no physical examination has been made; neither is there any reason for us to do so. Dr. Stewart, under whose treatment she now is, believes that he can cure her without local treatment, and when that is at all possible, it is much better to adopt this plan. I consider it something akin to malpractice to make these physical investigations where there is no local trouble; it is a terrible ordeal for a young girl to submit herself to a physical examination, and it is only justifiable when it must be done. It is a great blunder to investigate these cases on a mere supposition, and I always avoid it when possible. Now, as I have told you, the pain is not in the region of the uterus, but in the region of the ovary and upon the left side; and, by the way, we find that the left ovary is more often the seat of inflammation than the right; then again, the pain commencing a week before the menstrual flow is a symptom which occurs in most cases with great regularity in those suffering from ovarian disease and painful ovulation. In nineteen cases out of twenty presenting these symptoms, you will be safe in making a diagnosis of ovarian trouble; you may not be able to say what the exact pathology is, although it is in all probability inflammatory or hyperæmic, when you have these painful ovulations. If this were a married lady, we could make an examination without outrage to her feelings; we should then find that the ovary was tender to the touch. The ovary in its normal condition will bear a certain amount of pressure, but in this case it would probably be quite tender, and by reflex action might produce nausea. This is the condition of things we find described under ovarian dyspepsia by some of the English authors, more especially within the last year or two by Fothergill, who gives an illustration of these cases. I have no doubt that this girl's trouble is ovarian. You will find in these cases that the menstrual period is irregular, because the uterus is under an abnormal ovarian influence.

I am one of those who believe that the ovaries are the main factors of the whole problem of menstruation; that they give the initial influence; and that they are the primary and most important structure of the sexual system, and, therefore, that menstruation is governed by the ovaries; hence, in disease of the ovaries the menstrual periods become irregular. This leucorrhœa from which the patient suffers, is relieved by injections, and when that is the case it is probably vaginal and not uterine; I have never yet seen uterine leucorrhœa relieved by an injection. I have no doubt the vaginitis is the source of her leucorrhœa, that is very common in such cases as this where the occupation of the patient compels her to bend the body forward, this position interfering with the return circulation.

We have also vaginitis in those who are below par in general health. The mucous membranes becoming relaxed assume an abnormal condition, especially in those of a strumous diathesis. Now in place of annoying this uterus, which is probably behaving as well as it can under its present influence, we shall direct our attention to relieving her vaginitis, and build up her general health, and thus try to relieve the ovaries. If she be restless at night, give her a little bromide to induce sleep, and, by and by, perhaps a little counter-irritation; also directing her to lie down during the day at intervals if possible, and so remove pressure from the ovaries and secure free circulation; so gradually guiding her along in this way to relieve that ovarian hyperæmia. This, I have no doubt, will afford her great benefit.

This case is extremely interesting for you. See what miserable work you would make of it if you were to direct your attention to the uterus. Suppose you were to give her emmenagogues when she was menstruating; you would simply increase the hyperæmia of her pelvic organs, and only make her worse. You thus see how important it is to find the cause of the difficulty from which this girl is suffering.

Unfortunately, our books have not sufficiently dwelt upon this form of deranged menstruation. I have seen cases of amenorrhœa, dysmenorrhœa, and this irregular menstruation treated by vigorous measures directed towards the uterus when it was not at fault, the disease being ovarian, as in this case. This is a point I desire you to bear in mind. When you have this pain in the left side, especially when it is aggravated by defecation, as it usually is, owing to the peristaltic action of the bowels, you may know that it is in all probability ovarian. As a proof of this, Dr. Stewart informs me just now that, when she is not suffering from constipation, the pain is considerably relieved. This case illustrates a derangement of menstruation which gives something of the same history as the cases of anæmia, but from another cause.

ORIGINAL ARTICLES.

A NEW METHOD OF TREATING LARGE BONE CAVITIES IN THE LOWER END OF THE FEMUR IN ADULTS.[1]

By F. LANGE, M.D.,
VISITING SURGEON TO BELLEVUE HOSPITAL, NEW YORK.

Though in young persons, as a rule, no considerable difficulty is experienced in healing large bone cavities, I have repeatedly experienced with adults, after extensive operations in the lower part of the diaphysis of the femur, a very obstinate condition with reference to complete recovery. Those large bone cavities are, sometimes, not filled up by tissue of permanent existence. Fistulæ remain which, perhaps, after a longer time of careful treatment, show a tendency to heal, but after some exertion or traumatism or constitutional disturbance are apt to open again under renewed suppuration; and though not often, still in some cases, after long years of more or less suppuration and attacks of inflammation, amyloid degeneration, with its fatal consequences, occurs.

In looking carefully over hospital records, one hardly ever fails to find recorded cases of one or the other of these varieties; the majority of them, probably, at last staying away from hospitals, be-

[1] Read before the New York Surgical Society, February 26, 1884.

coming tired of medical treatment as well as of their doctor.

In the three cases which I shall now present I have tried, by means of a plastic operation, to obliterate entirely the bone cavity. The operations consisted, with slight modifications, in forming an anterior flap from the soft parts covering the lower end of the femur, which has its base either corresponding to the articular line or laterally. Then, in our cases, where ankylosis existed in the straight position, the patella is extirpated and the whole anterior wall of the bone cavity is taken away. Finally, an oblique section is made, severing the anterior third of the condyles and descending toward the bottom of the bone cavity. In this way the abruptness of its lower edge is replaced by a smooth, oblique plane. The whole bone cavity must be most thoroughly scraped out and disinfected. I should recommend that a spray of a disinfectant solution should be forced against the bone surface from a short distance. Nothing like that gives such a thoroughly clean bone surface. Then the dorsal flap, whose length must correspond to the extent of the cavity, is depressed toward the bottom of the cavity and eventually fastened by a nail or needle. No sutures are applied. Of course raw surfaces remain above the edges of the flap, which are left to heal by granulation. It is remarkable how the great difference of level, existing in the beginning, disappears in the course of months. By and by that flap is raised again. It seems as if new formation of tissue, probably of a bony nature, takes place below it. I was led to practise this plan by a similar method practised and recommended by my friend, Dr. Neuber, on the head of the tibia. So far as I know, no similar operation has been performed on the lower end of the femur.

All of our three cases are very interesting. They occurred in women of from thirty-eight to forty-six years of age. All of them had a serious osteitis on the lower end of the femur above the epiphyseal junction some twenty-five to thirty-five years ago. None of them underwent any operation at that period, at least no operation by which the bone has been touched. In two, small particles of bone came away spontaneously, and that, in one of them, more than twenty years after the first attack. All had long intervals of fifteen or more years of health with a comparatively useful limb until, in one case from constitutional disturbance after childbirth, in the other two cases from traumatic causes, renewed inflammation took place at the original point of lesion. In all of them large cavities existed in the lower end of the diaphysis, the classical seat of osteomyelitis in young persons. In no case did these cavities contain any dead bone; but granulations, here and there broken down, so that pus lacunæ were formed. Toward the periphery small spiculæ of bone were found scattered between those granulations, but all the cancellar tissue was softened, rarefied, pervaded by granulations and small abscesses. The cortical substance was, to some extent, implicated also. The sharp spoon, without any great force, found a cavity which extended beyond the limits of the healthy bone. Finally it was arrested by a hard, sclerotic shell. The epiphysis, in all of these cases, was in a state of advanced fatty degeneration, but not pervaded by granulations.

In the upward direction, in all of these cases, there was no distinct boundary towards the medullary canal, at least no bony diaphragm—which is the rule in those standard bone abscesses, which, I think, clinically and pathologically, require a different conception from those just described. Not long ago, I presented to this Society a case of bone abscess in the lower half of the femur. The patient was about twenty-seven years of age, and his history was very similar to that of to-day's patients. In his case, however, the bone abscess was narrow, long, consisting of many small, lengthy pus lacunæ, and reaching almost as far as the middle of the femur. The cortical substance was enormously thickened, and a very small particle of dead bone was found within the cavity. The nature of this case was, I think, exactly the same as in these cases: but the process of new formation of bone was much more active, while the granulating process within the medullary spaces was not so active as to lead to formation of a large cavity at the expense of preëxisting bone tissue. Essentially, however, the contents and walls of this cavity were of the same nature. It seems to me that these cases must be differentiated from those bone abscesses which, within a smooth sclerotic bone cavity, covered by a rather smooth pyogenic membrane, contain a peculiar, creamy pus.

Let me mention that all these patients were born in those regions in which acute osteomyelitis is more frequently observed; one of them from Switzerland, the two others from the lowlands of Northern Germany.

Case I.—Mrs. P., forty years of age, born in Switzerland, from a healthy family. Had severe "typhoid fever" in her twelfth year, after which she was reduced for a long time to a state of considerable physical feebleness. During this period, and several months after the first-mentioned disease, she fell on her feet from about four to five feet, followed by pain in her knee. This left her for a short time; but, however, it very soon, during her day's work, returned with great severity. A severe inflammation of the bone followed, accompanied for a long time with pain and fever, till, after long application of poultices, an abscess broke above the knee, on the median and lateral aspect of the femur. A great deal of pus escaped, and, later on, several small particles of bone. After about half a year's duration, the process was healed. By and by the limb became useful, and remained so, except that she suffered from what she called "slight rheumatic" pains. There was no ankylosis. She married in her nineteenth year, and had had eight normal births.

In May, 1880, patient fell from a staircase, and received a severe blow against the left knee; was laid up with pain and swelling. About six weeks later, in middle of July, I saw her in consultation with Dr. Hueler. At that time there existed an extensive suppuration in and about the knee, which required a good many incisions. It was found that

the patella was broken, and that a kind of diaphragm passed from the seat of fracture near the upper edge of the patella toward the condyles, thus separating the upper recesses into two cavities, both of which were filled with matter. After about four or five months, patient was again able to walk, with stiff limb, a fistula remaining at the anterior aspect, somewhat above the internal condyle, and another at the outer aspect corresponding to the lower edge of the external condyle. The knee was in hyperextension, and an abnormal lateral mobility remained for a long time. The sinus led toward the joint, in a downward direction. The lower end of the femur was all the time thickened, the soft parts tense and immovable, but not particularly painful on pressure.

The history of the following two years, during which time the patient was not treated by me, is in short this: the sinus showed tendency to heal, but then with increasing pain and swelling, and absolute powerlessness for weeks, ample discharge occurred, after which the limb returned to a more normal condition. At last the patient consented to a renewed operation, which I had proposed years before, assuming that the real seat of the suppuration must be in the lower end of the femur, and I did it on the 27th of April of last year, in a way similar to that described.

The fractured patella did not offer any peculiar interest. A large cavity occupied the lower end of the thickened femur. It was laid open freely. A fistulous tract led through the obliterated joint between the condyles to the posterior surface of the femur. The fistula on the outer aspect communicated with that. The bone here was also softened and in a state of rarefaction. A good deal of it was gouged away. The soft parts on the anterior aspect were not so intimately depressed into the anterior deep bone cavity, nor was that possible, because in this case I had not yet made the horizontal section of the anterior portion of the condyles. The lower edge of the cavity, therefore, was too abrupt. Gradually complete recovery took place, not, however, without a slight attack of retention about three months after the operation. Still the soft parts, by the process of cicatrization, seemed to have been gradually drawn into the cavity. The limb is completely ankylosed, but reliable and useful. After the operation about four or five months elapsed till cicatrization was complete.

CASE II.—Mrs. B., forty-six years of age, from a healthy family, had in her seventeenth year a severe inflammation, preceded by rigor, above the right knee. The left one was also affected in the beginning, but improved spontaneously. After ten weeks of fearful suffering, an ample discharge of pus occurred above the internal condyle. The wound closed itself after several weeks, broke again after the first trials to walk, and then healed completely, and by and by the limb became useful. Flexion was somewhat impaired, and remained so. In 1870, she suffered from a lung trouble, which was thought to be consumption. During this time again appeared sudden pain in the previously affected limb, with rigors, redness, and swelling. After several weeks, an abscess broke about the old spot. No pieces of bone were discharged. Four months later, patient was able to walk again, but a fistula remained, and mobility grew worse and worse till finally the leg became quite stiff. In January, 1883, patient fell down stairs, was not able to take the necessary care after that, and very soon commenced to suffer again from severe pain above the knee-joint. On March 31st, I was called in consultation with Dr. Babier, and opened a large, apparently periarticular, abscess on the inner aspect, by two long incisions. Sinuses remained, with repeated attacks of retention, apparently due to an osteitic process within the bone. In September, the radical operation was done in the manner originally described. A large opening was found to exist on the anterior aspect of the femoral bone, tightly covered by the quadriceps femoris and upper edge of the patella. The cavity itself reached as far down as the epiphysis, which latter was in a state of advanced fatty degeneration.

Complete recovery took place in about three months. There is almost complete anchylosis. The patient is wearing a brace in order to promote stiffening. The limb is becoming useful and stronger. She is able to walk a few blocks, and improves every week.

CASE III.—Mrs. T., thirty-three years of age, had an acute osteitis in her thirteenth year, for which she was under medical treatment for seven months. An abscess broke, and a yellowish fluid was discharged. For the whole year subsequent to that the leg was stiff and flexed, and the patient was obliged to use crutches, but by using salt-water baths it became almost normal, flexible and useful. Fourteen years later the patient married, and four years after that she was delivered for the second time, that was in 1881. She had a protracted puerperium, with fever, and became much reduced in strength. Two months after that her thigh became inflamed; she was in bed for nine weeks; an abscess broke above the inner margin of the patella, and more of a serous yellowish pus was discharged. That healed, but after a short time renewed inflammation began. A fistula remained, the knee became quite stiff, but gradually could be somewhat used. In May, 1883, a small piece of bone was discharged, and in June, after a renewed attack of severe inflammation, another. In September I saw the patient and proposed an operation. The same was performed at Bellevue Hospital on the 3d of September. I confined myself to laying bare the fistulous opening which led into the bone on its anterior external aspect, corresponding about to upper edge of the patella. The tendon of the quadriceps had to be cut across. The opening was enlarged, and a large cavity scraped out, drained, and treated with the permanent antiseptic dressing. Everything went along nicely for about two months, when renewed retention and inflammation occurred. I then decided to do the radical plastic operation. This was done by my brother on the 28th of November under my directions. The defect of bone in this case was perhaps the largest of all. The

epiphysis was so much flattened and its cancellar tissue so rarefied that it broke under the chisel and was made smooth by means of a knife. The lower part of the diaphysis, the seat of the cavity, was very much thickened, but only a comparatively thin shell of bone remained, into which the large dorsal flap was depressed. Its point was fastened by a steel needle driven into the bone. Recovery has taken place in about ten weeks, and about ten days ago patient commenced to walk with a brace, in order to keep the limb entirely stiff and not allow of the slightest spring-like motion, which existed in this case as well as in that just presented.

The patella, as you see, shows on its rear surface osteitic thickening, and a carious surface just about that point, where, for a long time, it had been exposed to the influence of the inflammatory products.

It was peculiar to all of these cases that the opening into the bone cavity was on the anterior aspect, corresponding about to the insertion of the quadriceps femoris.

A CASE OF SARCOMA IN THE ANTERIOR MEDIASTINUM.

By EDWARD T. BRUEN, M.D.,
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A. N., a male, came under my notice in the Philadelphia Hospital in December, 1882. His family record was free from any history of malignant disease, and he had enjoyed good health until eight months before. His illness had been chiefly characterized by emaciation and pain in the chest. He was a tall, slightly built man, and when I saw him had evidently lost half his weight. The pain was most severe over the upper segment of the sternum, and radiated around the chest. There was dulness on percussion over the upper part of the sternum, and the respiratory murmur at the right border of the sternum was bronchial. The cardiac sounds, particularly the second, were almost inaudible. The remarkable feature about the above physical signs of percussion and auscultation was the localization of the pathological physical signs to a district scarcely more than four inches square at the upper part of the sternum; the dulness downward was continuous with the cardiac dulness. Elsewhere, throughout the lungs, the physical signs were normal. The pressure-symptoms were very few, principally consisting in some evidences of pressure on the venous trunks, such as lividity of the face, with enlargement of the veins of the upper part of the neck. The other viscera throughout the body were normal. The patient died from exhaustion February, 1883, worn out by pain, which increased with the progress of the case.

Post-mortem.—On removing the sternum and cartilages, they were found to be adherent upon the right side to a mass which occupied the anterior mediastinum. The growth was seven inches long, measuring from the sternal notch, and terminated in a somewhat diffused thickening of the visceral pleura, which covered the anterior margin of the upper and middle lobe of the right lung. The growth was sausage-shaped and about two and one-half inches broad. It overlaid the aorta, pulmonary artery, and the vessels of the neck, thereby compressing them, and accounting for the muffling of the cardiac second sounds during life. The point of origin of the growth was obscure; it was evidently unconnected with the anterior mediastinal glands, or with the thymus gland; some of the lymphatic glands at the root of the lung were slightly swollen, but not generally involved. The calibre of the trachea was not diminished. The glands of the neck were unaffected on either side. Laterally, at the lower portion of the growth, the pulmonary pleura was thickened at the line of contact with the growth, but the lungs were free from any traces of disease. The pericardial tissues at the right side of the chest were also somewhat thickened. The growth itself was of a fibrous consistence, of a gray-white color, and contained a softened tissue running through its centre. It was found, on microscopical examination, to be composed of medium-sized lymphoid cells, mixed with spindle-shaped cells, and imbedded in a homogeneous stroma, or a stroma which consisted of reticulated fibres and wavy fibrous tissue. The peripheral thickenings of the pleura and pericardium were made up of similar elements.

There are certain reflections, based upon the clinical history of these tumors, which may be profitably considered in this connection. The age of patients suffering from sarcoma is commonly less than in cancerous malignant growths. In *Virchow's Arch.*, Bd. xciii. Heft iii., the statement is recorded that in 7566 autopsies, 158 malignant mediastinal growths were observed; of these, 31 were cases of sarcoma, the average age of the greatest number of cases being 41 years. Twenty of these occurred in males, the average being 38 years; 11 in women, whose average age was 48.

One hundred and twenty-seven of the above (158 cases) were carcinomatous growths, 81 in men with an average age of 53 years; 46 in women, average age of 56 years. In the *Trans. of the Path. Soc. of London*, since 1866, five cases of mediastinal sarcoma have been reported—one by Fenwick in 1882, æt. 29, a male; one by F. S. Eve, æt. 20, in 1880. In 1872, E. Clapton and J. F. Payne reported a case in a male, æt. 37. In 1871, T. B. Peacock, one in a male, æt. 27; and in 1870 one in a male æt. 20 years, by R. D. Powell.

Sarcomatous tumors, however, sometimes occur in the aged, as, for example, a case of sarcoma involving the pericardium in a woman æt. 76 (*Virchow's Arch.*), and a case reported to the Philadelphia Pathological Society, January, 1884, by J. C. Wilson, M.D., occurring in a woman over 60 years old.

The majority of tumors of this character originate and are found in the anterior mediastinal region.

In 24 cases reported by Kahnlich (*Virchow*, Bd. xciii.), 13 occurred in the anterior mediastinal region, originating from the connective tissues therein, 5 from the periosteum of the sternum, 3 from amid the cervical glands, 2 among the bronchial glands, and 1 from the pericardial substance. The thymus, or thyroid glands, may also form foci of origin for

these growths. In the cases quoted from the *London Path. Soc. Transactions*, the origin of the tumors was invariably in the anterior mediastinum; in two of them, however, the posterior mediastinal glands were also involved. The invasion of the various intrathoracic organs in the above cases was chiefly by contiguity, and in general there seems little or no tendency to excite inflammatory action in their vicinity. The lungs were secondarily involved in all the cases to which I have had access, with the exception of two cases: the one reported in this article, and one reported by R. D. Powell, M.D., both of which are unique because the disease was localized only in the mediastinum.

It would seem that the growths in distant parts of the lungs follow the distribution of the lymphatic vessels, the principal site of secondary processes being in the connective tissues surrounding the minute bronchial tubes. It is an interesting fact that while the lung would seem never to be the site of primary sarcoma, yet the pleural tissues may be primarily involved. In the *Med. Record*, January 5, 1884, a number of cases are quoted from Lepine, Birch-Hirschfield, Böhme, Eppinger, and Schultz, and one by R. W. Greenish (*Journal of Anatomy and Phys.*), in which the growths were abundantly distributed in the pleural tissues as primary formations. The point of origin is believed by these observers to be either directly from the ordinary connective tissue cells or from the endothelium of the lymphatics.

In mediastinal sarcomata the glands of the neck are less commonly involved than when the process is cancerous.

The origin of cancerous growths in the mediastinal region is usually in the posterior portion. In contrasting the respective sites of these two morbid growths, we may expect the physical signs and pressure-symptoms to correspond with the location. The vessels of the neck suffer either directly from pressure or by being converted into rigid tubes, allowing of no adaptation to the amount of blood passing through them. The descending vena cava and bloodvessels of the neck are often dilated. The trachea is very liable to pressure, also the aorta, which is usually covered by the growth, and by being pressed away from the sternum, the sounds of the aortic semilunar valves, and those of the pulmonary artery, may be much reduced in intensity. Pressure-symptoms from an aneurism growing laterally, or outward, are analogous; yet, in most cases, by means of bruit or other characters, an expansile blood-containing tumor can be easily distinguished from a solid neoplasm.

The possible predisposing causative influences of occupation deserve a passing mention. In the case reported at the outset, the patient was a shoemaker, accustomed to press his tools of trade against the sternum. The question might be stated thus: Given, a pure family history, free from taint of malignant disease, the etiology of these tumors in this region may be more readily linked with irritation than is the etiology of cancerous tumors. The cases instanced in this paper were mostly free from an ancestry tainted with malignant disease. The anterior location of these growths in so many cases would also favor the theory of a traumatic etiology.

Sarcomata in the chest, as elsewhere, show a rapidity of development which contrasts with the cancerous type of growth. The general symptoms in cases of intrathoracic sarcoma, such as emaciation or pain, are relative to the size and location of the tumor, and the cachexia of malignant disease is usually well marked.

In the case of the patient recorded under my own observation, the opinion was entertained that we had to do with a malignant growth which would prove a sarcoma. The diagnosis was chiefly based upon the location of the disease in the anterior instead of the posterior mediastinum, upon the age of the patient, upon the rapidity of the progress of the case, which began in April and terminated in the following February, and the exclusion of aneurism chiefly by the absence of the usual signs of a blood-containing tumor.

CASE OF ARTIFICIAL OPENING THROUGH THE ŒSOPHAGUS INTO THE TRACHEA, PRODUCED BY SWALLOWING A DENTAL PLATE.

BY FRANK E. CASTLE, M.D.,
OF WATERBURY, CONN.

MR. F. S., aged thirty-five, unmarried, died of pulmonary consumption April 21, 1883. An autopsy was obtained, having been requested on account of throat symptoms of a peculiar nature, which had existed since swallowing a small, rubber dental plate nearly fifteen years before.

The following history was obtained, partly from the patient during my attendance on the case, and partly from the family.

The father and mother are now living, and in good health. Two aunts on the father's side died of consumption.

A younger brother has had slight hemorrhages at three or four different times, the first five years ago. He is now without cough, and is apparently well. Mr. S.'s health, previous to the age of twenty-one, when he met with this accident, was uniformly good. On the night of December 31, 1868, Mr. S. retired late, and had been sleeping about an hour, when he was awakened by a severe choking cough, and found himself unable to breathe.

He sprang from the bed, and fell unconscious to the floor, but was soon able to rise and hurry down stairs for some water. As soon as he could speak, he related his experience to his mother, and complained of a terrible pain in the chest.

His breathing was difficult, and accompanied by a loud, stridulous noise, as of one with croup. A doctor was summoned, but it was nearly two hours before his arrival.

In the mean time, Mr. S. had vomited freely, and his breathing had become more tranquil. It was considered a case of congestion of the lungs, and treated accordingly. Mr. S. slowly regained his strength, but was constantly harassed with pain and soreness underneath the sternum, and by a

severe cough. On the twelfth day after the attack, he was able to return to his occupation as bookkeeper in a store. On the second day of his illness, he asked for his false teeth, supposing that he had removed the plate from his mouth during the strangling fit, and that it had been laid aside.

It, however, had not been seen, and thinking that it might have been cast out while vomiting, search was made in the snow where the bowl had been emptied but it was not found, although they went so far as to melt the snow with hot water. Even then it was not supposed possible that he could have swallowed it, and these facts were not mentioned to the physician at the time, although later the family were convinced that such an accident had occurred.

After resuming business, his cough persisted, and the soreness beneath the sternum remained; and in the spring his health failed very decidedly. He continued, however, at his employment until the 24th of August, when he went to Minnesota, where he remained eight months. He returned looking much better, but his cough remained the same, and he would frequently choke at the table and reject pieces of food that he had swallowed. At one time, after eating some dried beef, he insisted that a piece had lodged in his throat, and three days later he coughed it up.

In June, 1871, he consulted Dr. Sayre, of New York, who introduced a probang into the stomach, but found no stricture; but a very sore spot was reached, and great pain felt, especially on the withdrawal of the instrument. A treatment of swabbing the throat was instituted by Dr. Sayre, and was carried out for some weeks at home by the family physician. As this seemed of no benefit, and was very painful, it was given up, and for about two years he simply attended to his general health, living in the open air as much as possible, and taking horseback exercise. During these two years, and the two or three following, he had several hemorrhages, in one of which it was estimated that he lost a pint and a half of blood.

About this time, 1872, he engaged again in business, in which he continued until within a week of his death.

When he first came under my observation, he seemed fairly well nourished and of average strength. Besides the symptoms already detailed, he was much troubled with palpitation of the heart, and with the belching of large volumes of air, the latter being much greater after partaking of food or drink. He did not taste the food in the air thrown off, and digestion seemed well performed. He was always a heavy smoker, but cutting down the amount of tobacco used did not much diminish the palpitation.

The heart was free from valvular disease, and the cause of so much belching of wind was not determined.

The difficulty in swallowing already alluded to, demands further consideration, as this symptom bears so directly on what was revealed at the autopsy. Mr. S. found that by bending his head to the left, and projecting his chin forwards and to the right, he had much less difficulty in swallowing and fewer choking attacks. This awkward motion and the liability of expelling his food with great force during these attacks, deterred him from going much into society and he became somewhat despondent, though naturally of a cheerful disposition.

He continued in the state described until early in the winter of 1883, when he commenced to fail in strength and grow pale. His cough also changed in character, and he expectorated abundantly of purulent matter, and it was evident that his lungs were diseased. Another symptom, unexplained before the autopsy, became prominent during the winter.

Mr. S. would occasionally suffer from attacks of pain in the bowels and vomiting, and when failing to obtain relief from domestic remedies, would send for me to inject morphine. I advised change of climate for the winter, but finding it very inconvenient to leave, he remained at home, where he died in April, 1883. His last few weeks were marked by a very rapid failure, and he died with the ordinary symptoms of phthisis

Autopsy (eight hours after death).—Present and assisting, Drs. Holmes and Barber. Body less emaciated than usual after death from phthisis. Pericardium, and heart normal. The left lung free from adhesions: the upper two-fifths tuberculous, with small cavities containing purulent matter. Right lung slightly adherent posteriorly at the apex; the upper third tuberculous. Trachea removed, with a corresponding length of the œsophagus. The two organs were fused together from old inflammatory deposit. On slitting up the œsophagus and trachea, the lesion of special interest was presented.

Two inches from the cricoid an oval opening existed, connecting these two tubes. This opening was situated a little obliquely and slightly to the right of the median line and measured one inch and a quarter in its long diameter. By bending the specimen to one side and at the same time slightly twisting it, the edges of the opening could be made to approximate and close it, thus explaining the position assumed by Mr. S., as mentioned in the previous history.

The stomach was dilated; otherwise normal. The intestines were slit through their entire length, and nothing found abnormal until the ileo-cæcal valve was reached, when quite a thickening was seen surrounding this part. About the middle of the transverse colon, a stenosis of the gut was met with, which would but just admit the forefinger, and this size was maintained throughout the remainder of the intestine, Above this narrowing the canal was somewhat dilated. This condition of the intestines leads to the inference that the plate became lodged there temporarily and then passed on through the bowels.

The attacks of pain already alluded to were probably due to temporary obstruction. Two gall-stones filled nearly the entire gall-bladder, each three-quarters of an inch in diameter; the remaining space was filled by several smaller ones. All of the other organs were healthy.

REMARKS.—In explanation of the large amount of wind which was belched, I offer the following:

That during deglutition, air would pass from the trachea through this opening into the œsophagus and be carried before the food into the stomach, which it simply distended mechanically, for this symptom was most pronounced after meals.

That the plate was swallowed, I think the history abundantly shows; also, that the opening was made by the plate and that it had existed since the illness of 1868, for the symptoms remained practically unchanged from that time until his death.

That the lesion was not the result of syphilis or tubercle is evident, for never has there existed a symptom of the former, and not of the latter until six months of his death.

In searching the literature to which I have access, I can find no case similar to the one here presented.

MEDICAL PROGRESS.

Hydrofluoric Acid and the Fluorides in Aneurism and Cardiac Disease.—Surgeon L. A. Waddell, of Calcutta, who has been making an extended study of the physiological and medicinal action of hydrofluoric acid and the fluorides, says that in aortic aneurism fluorine may be admissible on account of its property of combating vascular fulness; but in endeavoring by its aid to relieve the arterial tension, care must be taken not to induce such an advanced state of anæmia as will aggravate those degenerative changes, to which the aneurismal swelling partly owes its origin. It will also be obvious that the dose must be sufficiently small to avoid the possibility of vomiting. Fluorine is unlikely to assist in the removal of material which is actually effused and organized.

In mitral disease the use of these drugs must be invariably bad, for they weaken the heart, and have none of the tonic and stimulating properties which render digitalis of such value in this affection. In aortic disease the ultimate effect would be to aggravate dangerously the low arterial tension which obtains during the ventricular diastole.—*Indian Med. Gazette*, December, 1883.

Ovariotomy on a Child.—At the meeting of the Gesellschaft für Geburtshülfe und Gynäkologie, in Berlin, on October 26, 1883, Dr. Roemer reported the case of a child, æt. twenty months, upon whom he had performed ovariotomy two months previously.

The child had learned to walk at the age of fifteen months, at which time the parents noticed a peculiarity in its gait. It was taken to the Augusta Hospital, when it was observed that the abdomen was very prominent and the lumbar vertebræ were lordotic, while the dorsal vertebræ and the upper part of the body were bent very far backward. On examination, a fluctuating, movable tumor was felt in the pelvis, which could be recognized as high as the umbilicus. Puncture showed that it contained clear, albuminous serum, and the case was diagnosticated as a mixed cystic tumor, probably of the ovary, though possibly arising from the mesentery. Within two weeks the tumor had grown so much that it extended above the umbilicus and almost to the xiphoid cartilage, and reached on either side to the mammary line. It was again punctured, and about f ℥x of fluid withdrawn. A few days afterwards laparotomy was performed, although the diagnosis of ovarian tumor was not certain. As soon, however, as the abdomen was opened, it was seen that the tumor sprang from the right side of the uterus by a long, thin pedicle. This was ligated and cut off, and the tumor removed entire. The left ovary was found to be perfectly normal. The child made a good recovery.

The pathological examination of the tumor was made by Dr. O. Israel, who found it to be a teratoma.—*Deutsch. med. Wochensch.*, December 26, 1883.

Ligation of Common Carotid for Traumatic Aneurism.—Dr. J. Thad. Johnson, of Atlanta, reports the case of a man who received a penetrating wound from the blade of an ordinary pocket-knife, in the side of the neck, about an inch below the angle of the jaw. Free hemorrhage occurred, but was soon arrested, and then entirely ceased. On the eighth day a small tumor was discovered, which steadily grew. On the twentieth day hemorrhage again occurred, and was again stopped by pressure. The tumor now grew so rapidly that the common carotid was ligated on the twenty-fourth day. Several hours after the operation the patient was discovered to be hemiplegic. He gradually sank, and died thirty-six hours after the operation.—*Southern Medical Record*, January, 1884.

Embolism and Paralysis from Pleural Irrigation.—Escherich has recently reported cases in which embolism and paralysis have resulted from washing out the pleural sac in empyema. He reports a case which occurred in the service of Prof. Gerhardt, of Munich, in which the patient died soon after an apoplectiform attack. The autopsy showed an abscess situated under the dura mater on the left side, with other smaller abscesses in the left hemisphere. Leichtenstein has published a similar case; and Dusch has reported one in which an embolus of the pulmonary artery was caused by washing out the pleura, as was shown by the autopsy.

Nervous accidents are also seen to occur during the operation, their pathogenesis being still a matter of some doubt. Paralysis of the arms and other parts of the body has also been known to be caused by this operation, and Lépine has seen reflex paralysis in cases of this nature, having its origin in the intercostal nerves.—*Gaz. Méd. de Paris*, Jan. 19, 1884.

Excessive Vomiting of Pregnancy.—In a recent paper on this subject Dr. Sutugin draws the following conclusions:

1. Excessive vomiting is one of the uncommon affections of pregnant women.

2. The affection appears after the second, and up to the last months of pregnancy; but it is much more frequent during the first half of the period of pregnancy.

3. The affection is more frequent amongst the richer classes. Race has no influence in its production.

4. It is more frequent in multiparæ.

5. The symptoms of the affection are very analogous to those of inanition, which explains the decreased urinary secretion, and the presence of albumen and cylinders in the urine.

6. In order to solve the question of the frequency of the appearance of albumen and casts in the second period, further observations are necessary.

7. Death takes place either by exhaustion or by in-

tercurrent puerperal disease, or from complicating diseases which have no direct relation with pregnancy.

8. The nature of the affection is still unknown.

9. The treatment should correspond to the different periods of the affection. If therapeutic means fail in the second period, premature delivery should be resorted to.—*Archives de Tocologie*, February, 1884.

The Treatment of Rheumatic Facial Paralysis.—At the close of a paper on this subject, read before the Berliner Medicinische Gesellschaft, on January 9th, Dr. Moritz Meyer drew the following conclusions:

In facial paralyses of a severe type, leeches, cataplasms, etc. are to be recommended—to hasten the cure on the one hand, and, on the other hand, to limit the number of degenerating nerve-fibres.

2. After the use of leeches, cataplasms, etc., direct manipulation over the nerves gives better results than have hitherto been obtained by electricity.

3. In chronic cases, the electric stimulus of strong faradic currents over the nerves should be tried, in order to stimulate the normal nerve-fibres, and increase the mobility and nutrition of the paralyzed muscles.—*Deutsche med. Wochensch.*, Jan. 17, 1884.

Inhalations of Oxygen in the Anorexia and Vomiting of Pregnancy.—Dr. A. Mayer reports four personal cases, and one of Dr. Maunoir, which show the influence of oxygen in combating the anorexia and vomiting of pregnancy. In these cases the symptoms did not present the same degree of intensity, but all showed the surprisingly rapid effect of the oxygen treatment. After the first inhalation of from five to ten quarts of oxygen the amelioration was undoubted, and a few inhalations were sufficient to give excellent results. In very severe cases reported by Pinard, the oxygen treatment succeeded after other therapeutic agents had been tried in vain. This method is perfectly harmless to the fœtus.—*Journ. de Méd. de Paris*, February 2, 1884.

Experimental Proof of Hydrophobia.—A boy, aged seven years, died with a curious collection of symptoms, which were similar to those of hydrophobia. Prof. Pasteur, to establish the diagnosis, inoculated two dogs and two rabbits with portions of the cerebral substance and the medulla. All four of the animals died with symptoms characteristic of the disease.—*Gaz. Méd. di Torino*, February 15, 1884.

Moist Spreading Gangrene of Foot and Leg in an Old Man; High Amputation.—Mr. Rivington, of the London Hospital, reports the case of a man, æt. 63 years, who suffered from moist spreading gangrene, caused by a slight accident. The gangrene extended to the ankle-joint, and the skin of the leg presented an inflammatory appearance to within a couple of inches of the knee-joint, and the limb was œdematous. The glands in the groin were enlarged. On the next day Mr. Rivington amputated the leg immediately above the knee. The arteries were atheromatous. On the following day the edge of the anterior flap was found to be gangrenous, with a suspicious dusky redness extending upwards. Two days later, the gangrene of the anterior flap had spread, but on the following day the stump looked better, and a line of demarcation had formed. Four days later the carbolic dressings were abandoned; the stump was thoroughly irrigated, powdered iodoform was dusted over it, strapping used to approximate the flaps, and cotton-wool and bandage applied. The patient slept and ate well. He wandered a little on one or two occasions. From this time the wound granulated healthily; the bone, which had protruded after retraction of the flaps, became gradually less prominent as the edges of the flaps approached each other during the healing process. Mr. Rivington believes that amputation saved the patient, although, of course, it is not possible to assert this positively. Neither can any very definite rule be laid down as to the choice of amputation or leaving the case to nature in senile gangrene. In some cases where the patient's arteries generally are diseased, when pressure induces gangrene of the soft parts over prominent points of bone, and when the patient appears broken down and worn out, amputation would speedily extinguish life; but on the other hand, he is persuaded that some of the many cases which have died when left to nature would have had their lives prolonged by operation.

As regards the seat of amputation for gangrene of the foot and lower part of the leg, the lower third of the thigh appears to him to be the safest and best place, as in cases which follow plugging of the femoral artery the gangrene rarely extends beyond the lower part of the thigh. Here the vitality of the part is greater, the healing powers more active, and there is far less liability to a return of the disease than there would be below the knee. In his own experience amputation in the lower third of the thigh is a very successful procedure, especially with antiseptic precautions. Whether high amputation should be resorted to or not in other forms of gangrene is not so clear. In traumatic cases and in septic cases he has generally amputated immediately above, but clear of, the disease, and he followed this practice in a case of double amputation for gangrene from frost-bite with a successful issue, and without the recurrence of gangrene or sloughing of the flaps.—*Lancet*, February 16, 1884.

Porro Operations.—In a letter to the *British Medical Journal*, of February 16, 1884, Dr. Clement Godson states that Dr. H. Fehling, of Stuttgart, performed his fifth Porro operation, on January 26th, in a case of rickety pelvis. Both mother and child are well. His five operations have given four recoveries, the same result as obtained by Prof. Porro. He also states that Dr. Savage performed the operation during the sixth month of pregnancy, in Sept. 1883, the patient recovering.

Extirpation of Goitre by Means of the Elastic Ligature.—Dr. G. Usiglio reports the case of a patient, æt. 56, who had enlargement of the thyroid body, due to hyperplasia of the left lobe, in which the enlargement was removed by means of the elastic ligature. The part came away in five days, and the patient recovered easily.

Two months previously, March, 1833, Dr. G. B. Masta had successfully employed the same means for the removal of a pedunculated tumor. De Vecchi and Castelleone have also reported cases.

An incision is made in the skin, in which the ligature is placed, the wound being disinfected and the ligature tightened daily.—*Gazz. degli Ospitali*, January 16, 1884.

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ENTERECTOMY AND ENTERORRHAPHY IN GANGRENOUS HERNIA.

THE management of the gangrenous intestine in cases of strangulated hernia is, in view of the evil consequences which are liable to follow the condition of the bowel, a question that involves more than ordinary judgment and demands serious consideration. The usual practice, after having relieved the stricture, is to open the tube and attempt the establishment of an artificial anus. That efforts in this direction have for many years been regarded with disfavor is shown by the fact that Ramdohr, in 1727, excised two feet of the mortified bowel, stitched the ends together, and saved his patient. Up to 1846, the operation was repeated by De Vermale, Duverger, Schmid, Nayler, Boyer, Lavielle, Dieffenbach, Luzenberg, and twice by Astley Cooper, the entire 11 cases having resulted in 7 complete cures, 1 recovery with an artificial anus, and 3 deaths.

The procedure appears to have been lost sight of from 1846 to 1873, when it was revived by Lücke, and it has been practised during the past ten years at least sixty-seven times. It consists, in a few words, of relieving the stricture, drawing down and resecting the dead gut along with its attached mesentery, reëstablishing the continuity of the canal by appropriate sutures, and returning the parts into the abdominal cavity.

In our account of the results of the operation and some points concerning its proper performance since its revival, we have to express our indebtedness more especially to several papers which have appeared during the past year, of which the most noteworthy are those of REICHEL, of Breslau, BOUILLY, of Paris, and ILL, of Newark, which may be found, respectively, in the *Deutsche Zeitschrift für Chirurgie*, Bd. xix. Hefte 2 and 3, the *Revue de Chirurgie*, No. 5, and the *Medical Record*, Vol. 24, No. 12.

Circular resection and suture of the intestine in strangulated gangrenous hernia has been done by Fischer and Obalinski, each in 4 cases, by Billroth, Kocher, and Kuester, each in 3 cases, by Bardeleben, Bouilly, Bryk, Czerny, Dittel, Hagedorn, Ill, and Wittergren, each in 2 cases, and by Aman, Bardenheuer, Borel and Scherer, Feld, Fuller, Gaittai, Gussenbauer, Hertaux, Heusner, Jaffé, Julliard, Korzeniowski, Kosinski, Krönlein, Langenbeck, Ludvik, Lücke, Marcy, Molodenkow, Nicoladoni, Porter, Prati, Riedel, Rochelt, Roggenbau, Roser, Rydygier, Schede, Taendler, Viertel, Von Wahl, Weinlechner, Weiss, and Wolfler, respectively, in 1 case. Of the 67, 21 were complete cures, 2 recovered with an artificial anus, and 44, or 65.67 per cent., died.

As might naturally be expected, peritonitis was the cause of the fatal issue in the majority of cases. In two it was due to alcoholic delirium, so that, even if these cases be excluded, the mortality is twice as great as that following resection and suturing of the gut for artificial anus, as was pointed out in the editorial columns of THE MEDICAL NEWS for February 2d. This difference may, however, be readily accounted for when the condition of the intestine in the two lesions is considered. In gangrenous hernia the divided ends of the gut are very liable to be œdematous, ecchymosed, and inflamed, through which they are rendered soft and lacerable. That the circulation of the gut at the point of suture is extensively damaged is shown, first, by the cases of Kocher and Taendler, in which the upper end became gangrenous above the point of operation, respectively, for four and six inches; secondly, by three examples of laceration during the necessary manipulations; and, thirdly, by three instances of giving way of the sutures. In resection for artificial anus, on the other hand, sound intestine is divided and sutured, and these exciting causes of peritonitis, except it may be loosening of the stitches, are gotten rid of.

In performing the operation the following points should command the most careful attention:

1. To prevent effusion, the lumen of the gut must be temporarily occluded. This may be accomplished with a provisional catgut or silken ligature, but this method is open to the objection of throwing the intestine into folds which interfere with the proper insertion of the sutures. The occlusion may be effected with a clamp or forceps, or, still better,

with the fingers of assistants, as advised by Billroth, Fischer, Gussenbauer, Czerny, and Ill.

2. If gangrenous, a triangular portion of the mesentery should be removed, and the edges united by suture after the vessels are secured; if sound, it may be ligated in mass. In either event, the mesentery must not be separated from the bowel beyond the points of severance of the latter, lest gangrene of the edges of the wound ensue. Rydygier advises that the mesentery receive attention after the intestine has been resected, but in this he has no followers. The gut should be divided at a right angle to its axis, unless one end is smaller than the other, when the cut should be made at an acute angle.

3. The most important step of the operation is the insertion of the sutures, the material for which, in the present state of our knowledge, should be pure silk soaked in a proper solution of corrosive sublimate. The safest and most efficient mode of uniting the severed ends of the gut is with what is known as the Czerny-Lembert suture. This consists of an inner row of stitches, which are inserted at a distance of one-eighth of an inch from one another, and which include all the coats of the bowel, and an outer row, not so close together, each of which includes the serous covering only, and constitutes the classical suture of Lembert. If it should happen that the mucous membrane protrudes too much, as it may through the retraction of the muscular tunic, it should not be cut off on a level with the latter, as advised by Ill and Rydygier, but the inner row of stitches should be applied in such a way as to exclude it. Finally, the accurate approximation of the edges of the wound will be greatly facilitated if the first suture be inserted on the mesenteric side of the intestine, and the second at a point directly opposite.

As we have already seen, the damaged condition of the gut in the immediate vicinity of the gangrenous portion is the chief cause of failure after the operation. Hence, to insure better success in the future, the intestine should be resected only through a sound and undistended portion, beyond the seat of infarctions and effusions, since the sutures still further interfere with the vascular supply, and render partial or total gangrene of the edges of the wound imminent. It is for this reason that we consider the course pursued by Riedel, as described in the *Deutsche medicinische Wochenschrift*, No. 45, 1883, as being worthy of imitation. The gangrenous portion of the intestine having been withdrawn from the sac, and attached to the thigh by a few stitches, is drained by a large tube passed into the upper portion of the bowel. At the end of twenty-four hours, the parts in the interval having been kept moistened by naphthaline, or other antiseptic agent, the normal condition of the gut will have been restored, as indicated by the disappearance of the local signs of inflammation, and the return of its firmness, when the operation may be proceeded with. Whether this course be pursued or not, care must be taken to cut through sound tissues, even at the expense of removing a larger amount of the tube, which really appears to be a matter of very little moment, as the cases do as well after resection of eight or ten inches as after the excision of two or three inches.

The question naturally arises, Does circular resection and suturing of the gut in gangrenous hernia present any advantages over attempting the formation of an artificial anus? In the present state of our knowledge, an intelligent answer can scarcely be made, because we know so little of the mortality of the latter conservative course. Ill has collected 29 cases, of which 25, or 86 per cent., died; and Benno-Schmidt, of Leipzic, in a paper read at the last Congress of the Association of German Surgeons, and published in the *Centralblatt für Chirurgie*, No. 23, 1883, places the mortality at 80 per cent. Hence, although Billroth, Dittel, Von Bergmann, Julliard, and Reichel favor the formation of an artificial anus, we think the surgeon will be wise who resorts to the operation which we have now considered, provided he imitates the example of Riedel, and also takes care to select sound portions of the gut for resection and suturing. If successful, the recovery is absolute; if it fails, and the patient survives with an artificial anus, or fecal fistule, his condition is not worse than if the operation had not been practised.

THOMSEN'S DISEASE.

Under the term *ataxia muscularis*, Dr. Thomsen described a new nervous affection, which consists in the occurrence of muscular spasm at the beginning of a voluntary movement. Prof. Westphal, recognizing the originality of Thomsen's observation, first coupled the discoverer's name with the new affection. Cases have been published by Seeligmüller, Bernhardt, Strümpell, Weichmann, and Mobius, in Germany, and by Ballet and Marie, in France. The phenomena observed in the various cases have been very uniform.

The affection consists essentially in muscular spasm, which comes on as any voluntary movement is attempted, but which disappears on a repetition of the movement. The affection is hereditary, and, as it manifests itself in infancy, is doubtless congenital. In most of the cases, there is a hypertrophic enlargement of the muscles. The cramps are notably increased by fatigue, and when, after a period of repose, the patient again attempts movements.

All the muscles of the body, including those of the eyes and tongue, may be affected. The electric

reaction and the cutaneous and muscular reflexes remain normal, and sensibility is unimpaired. The condition of the muscles is that of exaggerated reaction to the motor impulses or excitations.

The increase in the volume of the muscular masses, the hereditary character of the affection, and the marked predominance of the cases in males, ally this affection with pseudo-hypertrophic paralysis.

UNDERBIDDING FOR STUDENTS.

The *exposé* by Dr. David W. Yandell, in the February issue of *The American Practitioner*, of the recent proceedings of the Louisville Medical College, is, to say the least, humiliating to those who had commenced to hope that the profession in America was becoming more elevated in tone as it was growing in intelligence. Judging from the practices of some of the professors of this "foremost school in the country," before and after their connection with it, it would seem that association with some medical colleges, at least, is as demoralizing as horse-trading. We have ourselves seen one of the letters offering to take students on the so-called "beneficiary" reduction-rate basis, which have been published by Dr. Yandell. It was sent to a student of medicine, and offered largely reduced rates, and urged the claims of the Louisville Medical College and of Louisville, "the medical centre of the South and West, the healthiest large city in America; beyond the reach of yellow fever," etc.

We sincerely trust that some efficient remedy for such degrading and disgraceful practices, "hurtful to the best interests of medical teaching, medical men, and medical students," shall be speedily discovered. Till then, the best that can be done is to expose such practices to public gaze and public scorn, and the thanks of the profession are due Dr. Yandell for the fearless performance of this unpleasant duty.

In this connection it seems pertinent to reflect on the results of gratuitous instruction at colleges in general, and especially at medical colleges. The general effect of indiscriminate disbursement of free scholarships is baneful in inviting to the study of medicine those who are utterly unfit for it, by reason of their want of the requisite preliminary education. Such opportunities should always be limited, and they should be awarded only upon competitive examination, which does not exclude the deserving and energetic, while it eliminates a large number of utterly unsuitable applicants.

We, therefore, note with regret a circular issued by the University of Minnesota, in which it is stated that tuition is absolutely free, and that the Medical Faculty constitutes an examining and licensing body. At present no instruction is offered, but the degrees in medicine of the University are conferred upon all persons who pass the examination.

A propos of the above, and showing that the profession itself is not responsible for these degrading practices, and the resulting low standard of medical education, we take pleasure in calling attention to a circular issued by the Medical Society of Trumbull County, Ohio, containing a schedule of subjects for a preliminary examination, to be hereafter exacted of those who propose to study medicine under the tuition of members of the Society.

A schedule adopted early in 1882 has been amended to secure uniformity with that adopted by the Medical Society of the State of Pennsylvania in June, 1883. The Society recommends that the period of study required be five years, and that its members shall require their students to attend only such medical colleges as either require an examination for admission similar to the above or make the full three years' graded course obligatory.

Such influences as these cannot be without their effect, and it is to be hoped that the leaven thus introduced will so rapidly extend itself as to more than counteract the opposite influence.

SOME RECENT SURGERY OF THE STOMACH.

Since the appearance, in the editorial columns of The Medical News for November 24, 1883, of a critical inquiry into the merits of resection of the pylorus, several new cases have been recorded, which sustain the view expressed at that time—that it should not be performed, at any rate, for carcinoma.

In the *Correspondenzenblatt für Schweizer Aerzte*, for Nov. 1883, may be found three cases of operation for carcinoma by Kocher, of which two died within twenty-four hours, and one was living twenty-four days subsequently. Another fatal result in four hours is reported by Maurer, in the *Archiv für Klinische Chirurgie*, Bd. xxx. Heft 1, 1884, and he informs us that the case of Czerny, which was living at the expiration of ten months, when we referred to it, expired, eight months subsequently, with local recurrence.

Maurer also gives the details of a case of ulcer of the stomach, in which Czerny resorted to a new procedure, which possesses manifest advantages over pylorectomy. Instead of making an ordinary resection, and attaching the duodenum to the stomach, he opened the latter transversely to its long axis, by an incision carried through the lesser curvature, scraped away the greater portion of the ulcerated surface, and covered in the defect with twenty-six stitches inserted through the mucous membrane, and, finally, removed the remainder of the ulcer by ex-

cision of an elliptical portion of the entire thickness of the stomach, which was closed in the usual way. The man made a rapid recovery, and had gained twenty pounds in weight at the expiration of three months.

STATE APPROPRIATION TO MEDICAL SCHOOLS.

THE Bill brought before the General Assembly of Virginia, providing for a State Board of Examiners, and which has now become a law, was noticed in a late issue of THE MEDICAL NEWS.

The Assembly has now before it a bill appropriating $7500, annually, to the Medical College of Virginia, situated in Richmond, and providing,

"That there shall be admitted to the Medical College of Virginia, while this amount is paid, free from all charge for tuition, . . . as many students, who are citizens of Virginia, as there are members of the General Assembly, each member of which is hereby empowered to nominate, in each year, from his county or district, a student to the faculty of the said college, who may prescribe the academic qualifications of the nominee."

As regards the bill it may be said, in the first place, that the clause just quoted is as ambiguous as it is bad. The "who," in "who may prescribe," may refer either to the faculty or to the nominating member. In the latter case, it is especially bad, since the member might send a student whose educational advantages had been *nil*, and compel the faculty to receive him.

Again, the bill is bad, because a Legislature has no right to appropriate public money to give a citizen a professional education. If the medical student receives State aid, why not the law student, and those entering other professions.

Public policy has emphatically declared that "public education can only be justified on the ground that the citizen, by being taught the elements of education, is thereby better fitted to discharge his duties to society as a citizen in those functions which are common to all citizens. This reason utterly fails to apply to professions and professional education. They are *special* and *individual*, and, therefore, outside of the reason which vindicates public school instruction for the masses." No one, by reason of his influence with a politician, has a right to be furnished with a business at the public expense. It would be misappropriation of public money, and therefore unjust. Moreover, such an appropriation of public money to one institution is unjust and injurious to other institutions in the State, and on this ground should not be permitted.

THE EXCLUSION OF AMERICAN PORK FROM THE GERMAN EMPIRE.

WE call especial attention to the important facts contained in the report to the Surgeon-General made by Assistant Surgeon Pope, which appears in another column. The entire exemption from trichinosis of the American soldiers in the United States Army, though the American hog is a conspicuous part of their diet, shows very clearly that, to prevent the disease in Germany, lessons in cooking are more needed than exclusion of American pork.

If Charles Lamb is to be believed, the Chinese for seventy thousand ages ate their meat raw, clawing it or biting it from the living animal, and then only accidentally learned how delicious roast pig was. If Germans will eat their pork half-cooked they are little in advance of this ancient practice of the people of Confucius, and need to be taught, by the conflagration of a few pigsties, as the Chinese were, or by the burning of their butcher shops, the excellence of properly cooked pork. The protection that this cooking gives the eater will need no other enforcement.

In striking and favorable contrast with the action of the German authorities is the conduct of the French Government. The latter referred the question of the introduction into France of American pork to the Academy of Medicine of Paris; the Academy appointed a Commission to consider the subject, and on the 22d of last January this Commission made its report, and its conclusion is, that as no case of trichinosis has been ascertained to have occurred in France or in England from the use of salted American pork, its importation can be authorized in France.

WE invite the attention of our readers to an excellent paper "On the Artificial Culture of Disease Germs, and what it Teaches," read by DR. D. E. SALMON, of the Agricultural Department, Washington, before the Brooklyn Pathological Society, and published in its *Proceedings* for January, 1884. Dr. Salmon presents fully and clearly the difficulties in the way of such culture, the methods by which they are overcome, and the import of the results.

Dr. Salmon has also published a short paper in *Science* for February 8, 1884, in which he sustains very conclusively the claims of Dr. Klein, of London, as the discoverer, as far back as 1876, of the micrococcus of the swine plague, or pig cholera, although he failed to recognize its importance, and even afterwards pointed out a bacillus as the cause of the cholera, which seems now to be generally acknowledged to have been an error. Dr. Salmon himself was the first to demonstrate by satisfactory methods that this micrococcus exists in the blood during life; that it can be cultivated in flasks; and that the sixth successive cultivation, made with considerable quantities of liquid, and which contained no other organism than micrococcus, still produced the disease. He disproves the correctness

of the statement by Pasteur, in a communication to the Paris Academy, November 26, 1883, that Prof. Detmers, of Chicago, was the first to discover the microbe.

We note with pleasure that our contemporary, *The New York Medical Journal*, shows signs of becoming disgusted with the working of the New Code. The dissatisfaction expressed by the Homœopathic State Society in not being given equal representation in the proposed State Examining Board leads it, in its last issue, significantly to declare that, "it ought now to be plain that there is nothing to be gained by attempts to propitiate the sects."

SPECIAL ARTICLE.

TRICHINOSIS IN THE ARMY.

THE following report of ASSISTANT SURGEON POPE of the United States Army, to the Surgeon-General, is of considerable interest in connection with the present animated discussion growing out of the exclusion of American pork from the German Empire:

"The appearance of frequent epidemics of *trichiniasis*, not only among the civil population of that nation, but also among its troops, who might be supposed to be guarded with particular care from all infected food supplies, is well established.

"From the published returns of the Royal Prussian Army for seven years, from 1874 to 1881, I have been able to compile the accompanying table, which exhibits 445 cases of *trichiniasis*, with 15 deaths, in an aggregate of 1,408,273 cases of disease from all causes, and 8312 deaths; the average strength of the forces for that period being 326,608, officers and men.

Royal Prussian (German) Army.

Year.	Mean Strength	All Causes. Diseases.	All Causes. Deaths.	Trichiniasis. Cases.	Trichiniasis. Deaths.	Remarks.
1874-75	311,609	223,033	1285	103	1	
1875-76	327,254	220,670	1462	65	2	
1876-77	339,046	194,924	1219	28		
1877-78	327,271	198,853	1113	149	12	107 cases reported from the VIII. Army Corps alone.
1878-79	327,298	187,243	1093	17		
1879-80	330,430	190,444	1067	49	...	47 in the Guard Corps in Berlin.
1880-81	331,747	193,306	1073	43	...	17 cases in the II. Army Corps.
Total.	2,286,255	1,408,473	8312	445	15	
Yearly Average.	326,608	201,210	1187	64	2	

"In marked contrast to this condition of affairs, although trichinous poisoning has from time to time been reported among the civil population of the United States, American troops show singular exemption. A very careful examination has been made of the returns received at the office of the Surgeon-General for a period of eighteen years subsequent to June 30, 1866. These returns exhibit the fact that there have been treated 910,367 cases of disease from all causes, with 7191 deaths, in an average force of 29,171 officers and enlisted men, without a single case of *trichiniasis* appearing.

"A further examination of disease and mortality returns for the five years of war from 1861 to 1866 was made, and a grand aggregate of 6,029,564 cases of disease, with 156,885 deaths, was shown in an average force of 532,198 officers and men, without a case of *trichiniasis*.

"Prior to the year 1865, it is not impossible that cases of *trichiniasis* may have occurred among American troops and escaped attention, but since that date this singular disease has taken so prominent a place in medical thought and medical literature, that it is difficult to believe that any number could have occurred without detection by officers of the Medical Department of the United States Army.

"In partial explanation of this remarkable immunity, it may here be stated that the use of fresh pork in any shape is not common among American troops, since by reason of their enforced isolation, either at frontier stations or in garrisons remote from village or city life, they are precluded from over-indulgence in that particular.

"At some favored posts, the carefully tended company-pig is slaughtered for Thanksgiving or Christmas dinner; but it is always thoroughly cooked, and lasts but a short time.

"While, as stated, fresh pork is rarely used, the American hog, in the form of bacon and ham, has always been an important article of diet; three-sevenths of the meat-ration, which by law consists of twenty ounces of fresh beef or twelve ounces of pork per diem, being the usual allowance of the soldier at permanent military stations. To troops in the field, or on the march, the whole meat-ration is issued in bacon and in bulk. As used, the pork is usually thoroughly cooked; but emergencies often arise where it can be eaten only in the raw state, and in connection with hard bread, which is another component of the field ration; but, whether cooked or raw, were trichinous poisoning to occur, it must appear as an epidemic that would inevitably attract attention, and cause immediate report; and its non-existence upon the health returns is believed to be good evidence of its non-existence in the Army.

"Prussian troops, on the contrary, are stationed in thickly populated communities, are often quartered upon the inhabitants, and live in the utmost intimacy with them. At Berlin, where the Guard Corps is stationed, forty-four cases of *trichiniasis* were reported in 1879, all of them arising from meat furnished by one butcher. At Spandau, during the same year. *Schlackwurst* (a sausage composed of fresh pork, mixed with chopped veal, and

parboiled) was responsible for the epidemic among the troops.

"In whatever place stationed, the German soldier has at all times free access to innumerable cheap eating houses, where half-cooked or parboiled fresh pork, sausage, pig's-blood puddings, rye loaves, and thin beer, form staple articles of diet; and here it is that the German, whether civilian or soldier, poisons himself wholesale with trichinous pork.

"Could it be reasonably established, that the American hog was even to a moderate degree, the vehicle for transmission of *trichinæ spiralis* to German stomachs, an anomalous and contrary condition of affairs would surely be shown by the foregoing statistics; namely, that the German soldier at home, though carefully guarded by the rigor of 1800 Royal Sanitary Inspectors stationed through the Empire, to protect him from the dreadful scourge, contracts *trichiniasis* from alleged American pork, while his German brother abroad serving in the American Army, and fed a liberal daily allowance of genuine American pork, escapes without a pang.

"The weight of evidence is certainly against the supposition that the American hog is responsible for the existence of the *trichinæ spiralis* in Germany, and it may safely be predicted that even if he be successfully excluded from that country by vigorous prohibitions, *trichiniasis*—a disease unknown in the American Army, of rare occurrence on American soil, almost unknown in England (in fact, not mentioned as a cause of death upon the returns of the Registrar-General)—will continue to exist in the future, as in the past, so long as German hogs, whether bearing American labels or not, are eaten in German ways."

REVIEWS.

THE DISSECTOR'S MANUAL. By W. BRUCE CLARKE, M.A., M.B., etc., and CHARLES BARRETT LOCKWOOD, F.R.C.S., etc. 16mo. pp. viii. 390. Philadelphia: Henry C. Lea's Son & Co.

THIS is another excellent member of the set of manuals for students, of which we have already noticed several volumes. The authors are men of practical experience in teaching anatomy, and have the ability—which does not always accompany this—of communicating to others in pleasant and agreeable shape the lessons they themselves have learned. As a consequence, the suggestions of the book before us are of a kind which may be well commended to the student of anatomy as a help to him in his dissections. The large number of pages in the book make room for a good deal of material which is generally, or used to be—for there is already a great improvement in this respect—left to works specifically devoted to what is called regional or surgical anatomy. This is a part of anatomical study which cannot be begun too soon. It teaches anatomy and surgery at once, and the learning of each helps to fix the other in the memory.

The illustrations of this book are very good. If we have any fault to find, it is with the glossary, which is in some points ludicrously elementary and in others obscure. There are also some awkward expressions to be found here and there. But, with the exception of these minor defects, we find the book singularly free from anything to criticise adversely. On the other hand, it abounds in practical and suggestive ideas, and can be recommended not only to the student, but also to the practitioner. Its compact form and succinct style make it just the thing for busy men.

LESSONS ON THE HUMAN BODY; AN ELEMENTARY TREATISE UPON PHYSIOLOGY, HYGIENE, AND THE EFFECTS OF STIMULANTS AND NARCOTICS ON THE HUMAN SYSTEM. By ORESTES M. BRAND, Principal of Grammar and Primary School No. 4, Paterson, N. J. 8vo. pp. xii. 227. Boston and New York: Leach, Shewell & Sanborn.

THE publishers of this book, with commendable prudence, have allowed Mr. Brand to copyright the book in his own name. We say with commendable prudence, for if the book be sold on its merits, and not foisted upon ignorant or careless school committees by interested partisans, it will fall flat.

It would seem that Mr. Brand is not a doctor, and hence submitted the latter part of his MS. (on alcohol and tobacco) to Dr. Albert Day, of the Washingtonian Home, Boston. Would that Dr. Day had seen also the remainder of the MS.! *Ne sutor ultra crepidam.*

This part on alcohol is the best of the book, but it is poor and weak and not seldom incorrect. Thus (p. 181) some of the blood corpuscles under the influence of alcohol, it is stated, "throw out matter, which floats about in the fluid portion of the blood;" and the "loss of strength in the corpuscles [due to alcohol] is indicated by black specks of fatty matter, which in all cases of disorder in the blood are found in great numbers." Moreover (p. 184), the alcohol so hardens the brain, that the doctors often can dissect it without further hardening; and when sudden death occurs from drinking, it is "by the rapid massing of alcohol in the brain."

But in the earlier part of the work are found the worst errors. It would be no great matter if Mr. Brand, Principal of a grammar school, did not know exactly what cataract is, but when he publishes a text-book, albeit for elementary schools, and announces cataract as "a thick, milky matter spread over the cornea," and that the remedy is to "cut away a portion of the cornea,"(!) it then becomes a matter of public importance. Even in so simple a matter as the position of the eye, he seems to have a happy faculty of blundering. "The eye is situated . . . in hollows of the bones." How many hollows forsooth?

We can only gather up here and there a few of the many blunders as specimens. The inferior dental nerve "finally supplies the muscles of expression." Fig. 23 represents "the cranial nerves" as three branches of one trunk, which arises in the cerebellum. In fact, except one or two, most of the figures are execrable, both anatomically and artistically. The cornua of the thyroid cartilage are represented as "other cartilages" of the larynx, and the "Adam's apple" is represented in the middle of the lateral aspect of the thyroid cartilage by spots which can only be intended for the core and seeds

of that fatal fruit. Fig. 1 represents the lumbar spine as convex posteriorly, and the splenic curvature of the colon is marked (Fig. 19) as the "greater curvature of the stomach." On page twelve, we learn that the pelvis has four bones, and on page eighteen that it has but three. The madder experiment on the growth of bones, is most confusedly told, and "proves," so our sapient author says, that the bones "grow from the surface toward the center."

One would suppose that Mr. Brand, even if he did not know sufficient anatomy and physiology for a "grammar and primary school," should know a bit of Latin. But among his etymological brackets, we note *capilla* a hair, *tri* three, *motum* to move, *fermentum* to boil, *femoris* the thigh, *choroides* fleecy, and several more such.

But we must leave this little book and we do so with pleasure, in quoting one sentence (p. 101) we can all say amen to. "Indeed"—observe the delicious naïveté of the author's diction!—"Indeed, it may be *safely asserted* that carbonic acid gas *when undiluted* CANNOT BE BREATHED!" Quite so! Quite so!

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, February 26, 1884.

THE PRESIDENT, R. F. WEIR, M.D., IN THE CHAIR.

DR. A. G. GERSTER presented a patient who showed the result of three plastic operations for

RODENT ULCER.

A woman thirty-four years of age, married, presented herself to him about one year ago with a flat epithelioma, or what the older writers called rodent ulcer, on the left cheek. The disfigurement was very great. The size of the deeply depressed ulcer was about that of a silver half dollar, the main body of which occupied the region of the masseter muscle, and there was pseudo-ankylosis of the lower jaw due to scirrhous contraction of the new growth. Dr. Gerster proposed to remove the ulcer, and made a good prognosis so far as relapse of the disease was concerned, basing it principally upon the fact that none of the adjacent glands were affected. The patient, however, did not consent to be operated upon at that time. She returned in September last, with the ulcer twice as large as it was when he first saw her. Perforation into the oral cavity had taken place in the middle of the ulcer, and there was a continuous oozing of saliva from the opening. She then consented to submit to the operation, and on the 27th of September, 1883, he removed the entire cheek, together with a portion of the horizontal part and the angle of the lower jaw on the left side, commencing at about two inches from the median line, and also a small portion of the alveolar process of the superior maxilla. When the operation was finished the tongue could be seen for its entire length, and also the jaw which remained. He did not make an effort to close the wide opening by a plastic operation at that time, but waited until cicatricial contraction should diminish the size of this enormous defect to such an extent that a plastic operation could be performed, the object of which would be twofold; first, to form a new cheek, and second to prevent the recurrence of ankylosis of the lower jaw, which would have necessarily followed, in consequence of cicatricial contraction, had no plastic material been interposed between the two edges of the wound.

In order to accomplish this he was obliged to follow a plan which was not original with himself. The only case in which the method had been adopted, as far as he could ascertain, was one reported by Gussenbauer, in Langenbeck's *Archiv*, who performed a similar operation on both cheeks, the operation being rendered necessary by noma. Dr. Gerster followed the same plan substantially in his case. The first indication, then, was to give the oral cavity a lining. On the 25th of October, therefore, he raised a tongue-like flap from the temporal region an inch and three-quarters wide and three inches long. It was turned into the defect so as to present the epidermal surface toward the oral cavity. None of the mucous lining of the cheek could be saved at the first operation. There were, therefore, no soft parts remaining to which this flap could be attached, and consequently he drilled three holes in the alveolar process of the lower jaw and four in the alveolar process of the upper jaw, and to these the flap was attached by silver sutures. Primary union ensued, and a little more than four weeks later he proceeded to cover up the granulating surface corresponding to the lining of the oral cavity. To do this he raised a flap from the neck and turned it up into the space, and fastened it with a number of silver wire sutures. This flap at its apex necrosed for a short distance, because of the inequalities of the surface and lack of precise adjustment throughout its entire extent.

Dr. Gerster presented this patient because the case was not yet completed, as there is still one deformity to be corrected, namely, the angle of the mouth is drawn to the left side, and when that correction shall have been made he will present the patient again to the Society. At present she is able to open the mouth widely, and her ability to do so is improving from day to day.

OSTEOTOMY FOR GENU VALGUM—MCEWEN'S METHOD.

DR. C. T. POORE presented a patient, a girl three and a half years old, upon whom he had performed osteotomy on the right leg. The operation was performed three or four months ago, and was resorted to because he was unable to correct the deformity by means of mechanical appliances, the external lateral ligament becoming relaxed. It was the youngest patient upon whom he had ever performed the operation, and the correction was perfect.

DR. F. LANGE then made some

REMARKS ON EXCISION OF THE ANKLE-JOINT WITH SPECIAL REFERENCE TO TECHNIQUE AND AFTER-TREATMENT.

I am going to present six patients, for whom I have excised the ankle-joint more or less extensively within the last two years. In five of these cases the operation was done for scrofulous disease. The patients were, at the time of the operation, from one and a half to nine years old. In one case a gunshot-injury gave the indication. The patient is eighteen years old. I shall

not discuss the question, how far excision of an ankle-joint for scrofulous disease is indicated. Certainly a great difference of opinion exists regarding this point. A number of surgeons, especially in England and America, are in favor of expectant treatment. During six years of living in New York, I have not seen a single excision of the ankle-joint except one, which, strictly taken, was no excision, nor have I heard of one, and I am perfectly aware that in children a great deal can be achieved by mere expectant treatment. On the other hand, I hope to prove by my cases, that very good results can be reached by excision; that the course of the disease in some cases is undoubtedly shortened by years; and in some that it may have saved the limb. The prejudice prevailing against excision is mostly based, I believe, on deficient knowledge of good after-treatment, and, to some degree, of the technique of operation. To these two points I shall principally direct your attention. Regarding the operative procedure, I do not offer anything new. The genius of Langenbeck has presented a method, which, in spite of all new and more or less sensational modifications, is by far the best in every respect. It causes the least injury, gives the best guarantee for new formation of bone, if that can reasonably be expected, and allows of sufficient observation of the field of operation. To make the operation still more strictly subperiostal, I remove the periosteum, by means of a chisel, in all those places where ligaments or tendons are attached. In small children, in whom the epiphysis is mostly cartilaginous, free use can be made of the knife The bones are removed by means of a sharp chisel also; eventually a cross-cut is made through the periosteum of the tibia below the line of intended separation, to obviate tension and allow of free access for the chisel. In this way, also, superfluous denudation of the bone is avoided. The chisel must be sharp and thin, and form, by means of numerous small cuts, a smooth perpendicular surface on the cross-cut of the bone remaining. I always unite the periosteum cylinders by a few catgut sutures. In all cases the fibula has been excised also.

In the traumatic case, the astragalus was left untouched; in one case only its articular surface has been removed; in all the other cases it has been removed entirely. In one case, complete evidement of the os calcis was added. I need not say that antiseptic principles, with the permanent antiseptic dressing, were used in the wound-treatment. The limb is suspended by a long anterior plaster-of-Paris splint, according to Beely, into which iron rings are fastened. It reaches as far as the middle of the thigh, and keeps the knee in a somewhat flexed position. Great care must be taken during the dressing to keep the foot in such a way that it is not too much pulled forward. The assistant who holds the foot is very liable to commit this blunder. In this way the axis of the bones of the leg falls behind the intended point of the new joint, and you will see in some of my cases that I have not been able entirely to overcome this defect. In cases in which the whole astragalus has been removed, there might not result any disadvantage, because the bones of the leg are then supported by a part of the os calcis, which is lying more toward the middle line of the foot, and transfers more of the weight of the body upon the heel, In this way, I presume, the formation of pes valgus later on is avoided with more certainty. When, however, the astragalus is left, the correct relation of the axis of the leg must be strictly observed. During the wound dressing it is well to support the thigh on the calf, and to advise the person who holds the foot to fix it by gentle manipulation and slight extension, rather than to elevate the limb. After the wounds are healed, which can be achieved eventually under a few dressings—within, let us say, from six to eight weeks (in some of our cases it was four weeks; in one, the most extensive, the wound is not entirely healed after almost five months)—the patient gets a light dressing of pasteboard and starch bandage, or silicate, with quite thin wooden splints interposed. This dressing goes upward to the middle third of the thigh, and reaches down to the toes, keeping the knee slightly bent. It is split anteriorly and can be removed and reapplied by means of straps and buckles. I should advise cutting out the region of the heel to such an extent that, for reasons mentioned above, the foot can be slightly pushed backward within the dressing. I apply this dressing up to above the knee, in order to avoid rotation of the leg within the dressing. Now comes a very important stage of the after-treatment, during which, by means of active and passive movements, electricity, and bathing, the muscular action is stimulated. For this purpose, the dressing is often removed and the muscles exercised while the patient is in a lying posture, the limb being raised as much as possible. By and by, the child is made to push away a hand, which offers a slight resistance. In this way the young parts are accustomed to pressure, and after some weeks they will be so far advanced that, with the dressing—which must fit very accurately, and only allow a slight weight to be thrown upon the foot—the patient may commence to walk. The parents should be impressed with the importance of devoting all their attention to these exercises.

After several weeks more (in four of my cases about two months after the operation) the patient gets a good-fitting, double splint, which is inserted in a strong-laced shoe, and allows of a movement of about twenty degrees in the region of the ankle-joint, and reaches as high as the condyles of the tibia. Here it ends in two lateral side-pieces, which form the upper part of a pretty strong leather cylinder. The latter must be adapted very well to the upper half of the leg, as far down as the lower edge of the calf. If the patient has sufficient means, it is well to furnish every lateral splint with a mechanism by which the distance between the condyles and the sole can be increased, This can be used very well to correct abnormal pronation or supination. To improve an abnormal dislocation of the foot forward, pass an elastic ribbon across the lateral steel splints, which press slightly against the posterior circumference of the lower end of the tibia and fibula.

These apparatus will probably have to be worn for years. So far I have not deemed it advisable to remove the splint in any one of the children, though in one the operation was done almost two years ago. Four of these children run about all day, and one would hardly suppose that they had undergone such extensive operations.

I will pass around with each one of the patients a schematic sketch, illustrating the extent of the operation and principal seat of the disease. Also the specimens, as far as I deemed them worthy of preservation.

Case I.—Boy, now three and three-quarter years old, suffered from the ninth month of his age. Came under my care when not quite two years old, with scrofulous disease of the ankle-joint from osteitis of the lower end of the diaphysis of the tibia. Total excision, including the astragalus, on April 28, 1882. Extensive scrofulous cavity in lower end of tibia, which had to be removed. The scar above the new-formed tibia is now ten cm. (4 inches) long. The amount of bone removed was less, but certainly the operation was very extensive. Saw the patient for about ten days, after which time I put him under the care of my friend Dr. A. Büchler, on account of my going to Europe. Wounds healed after two months. After-treatment in the manner described. Splendid new formation of lower end of tibia and fibula. Malleoli well developed. Astragalus apparently replaced by a flat crescentic-shaped body. Slight pes valgus, for which inner side of sole had to be raised. Functional result very good. Shortening at present about two cm. ($\frac{3}{4}$ inch).

Case II.—Boy, nine years old. Came under my care four years ago with fistula above the malleolus internus, leading to scrofulous bone cavity in lower part of diaphysis, which was scraped out and healed after transient attack of inflammation in the ankle-joint. Was apparently quite well, without complaining about anything, for almost a year and a half, when slight fungoid swelling of the joint showed itself. Being absent from New York I did not see him until five months later, when the swelling had much increased, abscess had formed, and the limb was quite useless.

In October, 1882, total excision of ankle-joint, including the astragalus. Speedy recovery. Very little new formation of bone; some abnormal lateral mobility; considerable shortening of about four cm. ($1\frac{3}{5}$ inch). The femur of the affected side is also one and a half cm. ($\frac{3}{5}$ inch) shorter than that of the other. Functional result good. Boy runs about all day wearing high-heeled shoe and double steel splint. The specimen shows very beautifully the progress of the disease from the original seat of disease through the bone substance of the epiphysis to the astragalus, which shows the most destruction at a point opposite the canal which leads through the epiphysis of the tibia.

Case III.—Boy, nine years old. Had trouble with his right ankle-joint since his second year. Often repeated inflammations; later on several abscesses; transient, apparent recovery, with some pain and impaired use of limb remaining. Came under my care September 30, 1883, with abscess behind internal malleolus, which was opened, when caries of the joint was ascertained, for which excision was done on the 9th of October. From the astragalus only the articular part was removed by means of a broad, sharp chisel. Six weeks after the operation wounds completely healed. On the 2d of December shortening about three cm. ($1\frac{1}{5}$ inch). Little new formation of bone; slight lateral mobility. Malleoli narrow and axis of leg a little behind its normal insertion on the astragalus. Patient walks safely with or without brace. The excised portion of the tibia showed very deep, irregular depressions, some of which, at the line of the operation, were filled with organized tissue, while others presented a bare, carious surface.

Case IV.—Girl, six years of age. For three years slight limping and here and there pain, but foot always used until one week previous to my seeing her, when she presented thickening of lower end of tibia and inflammation of ankle-joint. September 1, 1883, complete excision, including astragalus; excellent new formation of bone and functional results. One interesting point was that seven weeks after the operation, when the patient had not walked yet, a shortening was made out of one and three-quarters cm. ($\frac{7}{10}$ inch). Three weeks later a shortening was made out of three cm. ($1\frac{1}{5}$ inch). Perhaps it would have been better to have delayed the walking exercises. The tibia is now one and a half cm. ($\frac{3}{5}$ inch) shorter than that of the opposite side. The new joint is quite firm and reliable, in spite of slight forward displacement of foot. The principal seat of the disease was a supra-epiphyseal scrofulous osteitis in the tibia.

Case V.—Boy, three years old. Commenced to suffer when nine months old. Extensive scrofulous osteitis of os calcaneum and lower end of tibia, involving the interposed joints and bones. Evidement of os calcis, complete excision of ankle-joint including the whole astragalus. In the os calcis and tibia scrofulous sequestra were found, which you see here.

Patient still under treatment, because the granulations repeatedly showed a fungoid character, and had to be scraped out. The patient commences now to walk in his starch dressing. I expect a good result ultimately, because a good new formation of bone is going on. Patient's mother died from consumption, and father is said to be consumptive. I shall present the boy a second time when he is able to walk.

Case VI.—Excision for gunshot injury. A young gentleman, eighteen years of age, tall and slender, from a healthy family, was shot by one of his friends, who was walking behind him, while the muzzle of his gun was at a short distance from the patient's heel. The load was small bird-shot. The contents of the gun entered the space between the posterior median edge of the tibia and the tendo Achillis, about two or three cm. ($\frac{3}{4}$ or $1\frac{1}{5}$ inch) above the internal malleolus, and, passing in a direction outward and forward, completely shattered the lower end of the fibula. The tibia was also broken into numerous fragments, and the tendons of the long flexors were completely torn; the tendo Achillis was partly carried away, while the tendon of the tibialis posticus was preserved. The posterior tibial nerve and artery were likewise not torn; they were lying imbedded in their bloody infiltrated sheath, within which a slight pulsation could be detected. I saw the patient about twenty-four hours after the injury, when several pieces of bone had been removed from the fibula. In spite of the extent of the injury, conservative treatment was tried by excision. Fully ten cm. (4 inches) of the tibia were removed. A large rent existed from the point of injury down to the joint within the lower end of the tibia.

The operation was done in Pine Hill, Ulster County, on August 13th, and the after-treatment for the first ten days was conducted by Dr. Laws, of this city. Then the patient was brought to New York, and I took charge of him. Extensive necrosis of soft parts, and, to some extent, of the periosteum, occurred, so that open antiseptic treatment with thorough drainage was resorted to. Complete cicatrization after five months. From that time, exercise, massage, and electricity. Patient is now able to walk, wearing a double splint with mechanism for ex-

tension, which takes part of its support on the thigh. He has been lately able to walk from one to two miles, but his foot is still weak and he uses a cane. Present shortening fully five cm. (2 inches). I ordered shoe with high heel and sole. New joint about two or three cm. ($\frac{3}{4}$ or $1\frac{1}{3}$ inch) above the normal one, at the point where the periosteum was most extensively torn. Muscular action still very weak; profuse perspiration about the foot all the time. I hope that after about a year's duration the patient will offer a very fair result.

DR. L. A. STIMSON said he had recently performed excision of the ankle-joint, and hoped soon to be able to present the patient to the Society. He also hoped that the case would show less lateral mobility than that shown by most of the cases presented by Dr. Lange, for he had preserved the malleoli in part, although removing the astragalus entire. The operation was performed after the method more recently described by Vogt, by making a longitudinal incision beginning about an inch and a half above the articular surface of the tibia and passing downward along the border of the extensor tendons for about three inches, with a short lateral incision from the lower part of this toward the tip of the external malleolus; through this incision the astragalus is easily removed and a very full view of the ankle-joint is obtained. He endeavored in his case to remove all the synovial membrane, with the preservation of the greater part of the two malleoli. It must be said, however, that in his case the disease manifested itself mainly in the synovial membrane, and only slightly in the tibia and fibula. The feature to which Dr. Lange had directed attention, namely, the displacement of the axis of the limb backward upon the foot, appeared also in his case, and he attributed it, as Dr. Lange had done, to the effect produced by pressure upon the heel, bringing the line of the weight of the body upon the foot somewhat posterior to the point where it normally falls.

DR. LANGE thought that perhaps the operation described by Dr. Stimson would be best if the disease involved the astragalus alone, but he thought it might not be possible to see all the parts involved, especially if the disease was situated pretty high up in the tibia; in such cases the longitudinal incision cannot be dispensed with. He also thought the principle to do as little injury and leave the parts in as nearly a normal condition as possible, was what especially commended Langenbeck's operation.

THE PRESIDENT remarked that he had had the opportunity to see two cases in which Busch's method of resection of the ankle was performed by making a transverse incision across the sole of the foot. Each of the different operators said that the method gave an admirable command of the parts. The result in both cases, however, was a permanent non-union of the os calcis, with considerable necrosis of the same; a result which was apprehended might occur.

The President also remarked, that last summer Neuber showed him two or three cases of necrosis of the head of the tibia, in which he had, after the removal of the diseased or dead bone, transplanted a V-shaped flap of skin into the bottom of the cavity and fastened it there by a nail. At the time they were exhibited they were doing admirably. Since then Dr. W. T. Bull had treated, in the New York Hospital, one case of tibial necrosis in the same way.

DR. F. LANGE then described a

NEW METHOD OF TREATING LARGE BONE CAVITIES IN THE LOWER END OF THE FEMUR IN ADULTS.

(See page 295.)

DR. LANGE said that he had tried the same method lately in extensive necrosis of the tibia, but without complete success. Probably for the reason which he had verified repeatedly, that in necrosis, if the operation must necessarily be performed, where there is a good deal of discharge and some infiltration of the tissues, a good deal of suppuration occurs in spite of the use of strict antiseptic precautions In the case alluded to, he was obliged to operate because the patient, a girl of perhaps five years of age, was losing weight, and gradually a somewhat hectic condition developed in spite of all efforts to build her up for the operation. The discharge was copious before and after the operation, and primary union did not take place. His operation, however, had proved somewhat beneficial, and would probably make recovery more speedy, because the inverted lateral flaps, though not fixed by primary union, had still contributed to diminish the bone cavity. He regarded the condition of the parts where primary union is expected as a very important factor. Infiltrated tissues, secreting pus somewhat freely, continue to discharge freely for some time, though the secreting surface may be removed. Apparently an irritant, lying within the tissues some distance from the wound, and being somewhat active, must first be made to disappear, either by absorption or secretion, from the free surface of the wound.

DR. A. G. GERSTER had resorted to this procedure in two cases. In one, he had to deal with a relapse of a carious affection of the lower part of the diaphysis of the femur. The patient had been operated upon fourteen or fifteen years ago, in Europe, and had been doing well ever since; but recently the disease returned, and an abscess formed, corresponding to the extensive cicatrix which occupied the inner aspect of the thigh. It was incised, and, after the disappearance of the febrile symptoms, Dr. Gerster attacked the disease itself, exposed the bone, and formed as shallow a trough as he could in the lower portion of the diaphysis of the femur. He then loosened up the skin on either side, turned the flaps into the bottom of the cavity, and fastened them in the manner mentioned. The patient had no fever, but the dressings getting soiled he removed them on the twelfth day, and found that to a considerable distance the old cicatricial substance had ulcerated under the influence of the profuse secretion which had taken place from the cavity. Nevertheless the flaps did not recede, as they do in these operations when the cavity is plugged after the old-fashioned way.

In another case Dr. Gerster performed necrotomy upon the head of the tibia, and if he had been able to obtain sufficient skin to reach to the bottom of the cavity, he thought the result would been even more satisfactory than it really was. As it was, the skin flaps were so short that he was obliged to leave uncovered a strip of bone in the median line, about one-third of an inch wide. Primary union took place as far as the cutaneous flaps reached, and there was no doubt that the recovery of the patient was very much hastened by

the procedure. He also noticed that the deep depression of the cicatrix and skin was diminishing, and, finally, is now on a level with the normal surface of the tibia, and that apparently the bottom of this depression gradually filled up with bony substance.

NECROSIS OF THE LOWER JAW, DUE TO PHOSPHORUS POISONING.

Dr. J. C. Hutchison presented the greater portion of the body of the lower jaw, which he removed from a woman forty-two years of age, who came under his observation about a year ago. She came from Frankford, Herkimer County, where she had been at work in a phosphorus factory, and from which place a number of patients had been received at the Brooklyn City Hospital. She gave the following history: Two years ago she had an ulcerated tooth on the left side of the lower jaw, which was extracted, and at the end of two weeks she returned to her work in the factory. About one year subsequently small pieces of bone began to discharge from the jaw, and she entered the hospital for the purpose of having an operation performed. Circumstances were such that it was impossible for her to remain as long as was desired before operative measures were resorted to. The operation was performed, and the bone exhibited was removed. The patient returned to her home, and Dr. Hutchison heard from her three months subsequently, when she stated that a spicula of bone had come out since her return, and he wrote to her that if she had further trouble, to let him know with reference to it. From the fact that he had not heard from the patient since, he concluded that complete recovery had ensued. He thought the specimen showed that the operation might have been deferred with advantage, if the patient could have consented, and with less loss of bone.

APHASIA FOLLOWING EXTERNAL INJURY OF THE HEAD WITHOUT WOUND OR CONTUSION OF THE SCALP.

Dr. H. B. Sands narrated a case of injury of the head, which to him seemed to be somewhat remarkable. A lady, aged forty-eight, residing in Hartford, Conn., two weeks before his visit, was thrown from a sleigh and probably struck upon her head. She was picked up in an unconscious condition, and on examination soon afterward, the attending physicians were unable to find any signs of external injury of the head, although there were marks of contusion on the neck, and also in the lumbar region. A few hours after the injury consciousness began to return, and vomiting occurred. It was also noticed that the pupil of the right eye was a little larger than that of the left, and was sluggish, although it responded to light.

The singular feature of the case was the existence of aphasia, which, though not extreme, was well marked, and presented the usual characteristics of aphasia resulting from purely pathological causes. Some change in the mental condition of the patient was noticeable, showing itself by a disposition to talk and by an unnatural degree of mirth. When Dr. Sands saw the patient she talked quite rapidly, using tolerably often a wrong word. In reading aloud about one word in every line was not the one she intended to use. She was aware of the infirmity, and became easily fatigued by mental exertion, experiencing pain on the left side of the head whenever she attempted to carry on a conversation for any length of time. The right hand appeared a little weak.

Dr. Sands was unable to recall a case exactly like the one related, and inquired what had been the experience of the members with regard to the production of aphasia from a blow upon the head. The patient's health is otherwise good, and there is no reason to suppose that any disease existed at the time of the injury. The urine has been examined, and found to be normal.

In endeavoring to account for the condition, the possibility of aphasia occurring simultaneously with the accident, as the result of some cause not traumatic, was taken into consideration. It seemed probable, however, that the lesion was due to the injury, because she presented the usual signs of concussion, and the return of consciousness was accompanied by vomiting. Moreover, examination of the heart failed to discover any valvular disease, and, as already stated, the patient's general health prior to the occurrence of the accident was known to be excellent.

Dr. Gerster mentioned a case in which aphasia took place in consequence of an apoplectic seizure during the healing of a wound made for the removal of cancerous breast, and apparently caused by embolism. The patient was sixty-two years of age. The left breast was amputated and the axillary space evacuated. Antiseptic dressings were applied, the wound was healed on the ninth day, when the patient got up and walked out into an adjoining room, lost her consciousness, and fell. She was picked up, put into bed, and when he saw her on the following morning she was unable to talk. There was hemiplegia, which disappeared during the course of the next two weeks. Deflection of the tongue and inequality of the pupils were noticed. In the course of three weeks she began to talk again, and the curious feature in the case was that she forgot the German language and spoke only her native tongue, that of Bohemia. She was unable to write, but was able to draw rough outlines of simple objects. She gradually learned certain letters, but was unable to write all letters. It was therefore a case of agraphia complicating aphasia. Recovery was gradual, and finally was so complete that she was again able to speak in German.

Her circulation was very poor, and three days before the apoplectic seizure Dr. Gerster found evidence of hypostatic congestion of the lungs. Whether this partial solidification of the lung was due to transmission of a clot from the wound into the lung, and infarction of the lung followed, from which an embolus was detached and carried into the circulation and produced the hemiplegia, he was unable to say. It seemed, however, to be in direct connection with the operation. Also whether the fall was from the apoplexy, or whether the fall produced the apoplexy, he was unable to determine positively.

Dr. Halsted remarked that the hemiplegia in Dr. Gerster's case could be explained without supposing the formation of infarction, and on the ground of the free anastomosis which had been demonstrated to exist in the lungs; so free that emboli may be carried directly through the lungs into the brain independent of the formation of an infarction.

Dr. Post referred to a case under treatment many years ago in the New York Hospital, that of a Swedish

sailor boy, who received a concussion of the brain, and while suffering from the cerebral disturbance forgot his English entirely, and was able to speak his native language only.

DR. LANGE referred to a case of disturbance in the use of language after an injury to the temporal region caused by the hoof of a horse. The man showed no deficiencies with reference to the number of words, but rather in using them intelligently. He answered questions very quickly, and words seemed to occur to him more than he needed. The case was not a recent one. A number of weeks elapsed after the injury before an operation was performed, and a large number of pieces of bone were removed, but without giving any permanent benefit. At times the patient was restless, and had to be watched and partially restrained. There were no paralytic symptoms. Finally he was discharged, uncured.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 6, 1884.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D., IN THE CHAIR.

AFTER the reading of the minutes and a report from the Section on Obstetrics, through its Secretary, Dr. Alexander Hunter, the Secretary read three communications from the Council. The first contained a report from

THE LIBRARY COMMITTEE,

in which it was stated that the volumes sent out in exchange numbered 112, while those received numbered 254, an excess of 142 volumes received.

THE PRESIDENT, in commenting on this report, remarked that it showed that if the system of exchanges was to be maintained, it would be necessary that the Academy should give more attention to the publication of its proceedings than it had done of late.

The second communication from the Council was in reference to

THE PROMPT PUBLICATION OF PAPERS,

and recommended the passage of a resolution to the effect that every paper read before the Academy should be presented to the Council, and on the approval of the latter should be immediately published at the expense of the Academy.

THE PRESIDENT suggested that those who read papers should publish only abstracts of them in the medical journals, as was the custom in Europe, reserving the full text for publication by the Academy. The object of the resolution was to insure their prompt publication, while at the same time the papers would reappear at the end of the year in the volume of *Transactions*. Still, it was not the design that there should be any compulsion in the matter, and any Fellow reading a paper could have the option of giving it to the profession through the journals, or of having it published by the Academy. The resolution was adopted.

A BENEFACTOR OF THE ACADEMY.

The third communication from the Council was in reference to a letter from Dr. Horace P. Farnham, ex-Treasurer of the Academy, in which he suggested, on account of the mortgage still remaining on the building of the Society, that those Fellows who intended to make bequests to it in their wills, should present the sums contemplated now instead, and with which he inclosed his own check for $1000. The Council recommended that, in consequence of this liberal gift, the name of Dr. Farnham should be enrolled among the Benefactors of the Academy.

On motion, the recommendation was adopted, and it was resolved that a vote of thanks be tendered Dr. Farnham, with the notification of his election as a Benefactor.

DR. GEORGE B. FOWLER then read the paper of the evening, illustrated with practical demonstrations, on

THE DETECTION OF ALBUMEN, WITH A REVIEW OF THE METHODS RECENTLY ADVANCED.

After alluding to the various kinds of albumen, he said that they were classified as native and derived, and that the native albumen which chiefly concerned the medical practitioner, was that of the blood, serum albumen. Then having spoken of some of its characteristics, he proceeded to detail a number of methods for precipitating it when present in the urine.

The first that he mentioned was by means of heat, which, he said, caused the formation of a solid clot when the quantity of albumen in solution amounted to nine per cent. Acid albumen and alkali albumen were derived forms of the substance, and neither of them was coagulable by heat. If, however, after the application of heat, a sufficient quantity of alkali in the one case, and acid in the other, were added to render the fluid neutral in its reaction, the albumen would be precipitated. He had found by experiment, that two per cent. was the smallest quantity of albumen that could be detected by heat. In experimenting with this and the other agents afterwards referred to, he had employed urine of a specific gravity of 1022, and he thought that possibly the results might be slightly different with urine of lower specific gravity than this. A point of practical importance in examining for albumen by means of heat, was to see that the urine was neither strongly acid nor strongly alkaline, and it was also always advisable to apply heat before adding acid, except for the purpose of neutralizing the fluid preparatory to making the examination.

Next he referred to the mineral acids, of which, he said, nitric acid afforded the most delicate test. By means of it, .1 per cent. of albumen could be detected. Picric acid had been suggested by Dr. Johnson, of London, and a saturated solution (about seven grains to the ounce of boiling water) was recommended for the purpose. Afterwards it was pointed out by Dr. Ralfe that the method was open to objection, on the ground that the picric acid precipitated peptones when they were present, in addition to the albumen. Dr. Johnson was inclined to doubt the existence of such a thing as peptonuria, because he had never been able to find an instance of it; but in connection with his son, a chemist, he undertook a series of experiments in regard to the matter. They found that when in any solution peptones were precipitated by picric acid, the precipitate was entirely redissolved by the application of heat. When the liquid was allowed to cool, however, the precipitate again appeared; though the addition of nitric acid cleared it up permanently. Subsequently some

one ascertained that if the urates were in excess in any urine tested by picric acid, they would be precipitated; but it was found that this precipitate also disappeared under the application of heat. The same was true as well of quinine, which, as was well known, was sometimes found in appreciable quantities in the urine of those using the drug to any considerable extent. The picric acid test was a very delicate one, detecting the presence of .1 per cent. of albumen; but it was necessary to employ great care in its use. When very minute quantities were to be detected, it was best to employ an equal bulk of the acid, as in Heller's method with nitric acid. By this means a delicate trace of albumen could sometimes be seen at the junction of the two fluids, which might escape observation if the test were used in any other way. One special advantage of the picric acid test was, that it would cause the precipitation of albumen in either a strongly acid or strongly alkaline urine.

Another class of tests in use were certain neutral salts, subsequently acidulated. One of these was the chloride of sodium (acidulated brine) test, suggested by Dr. Roberts, of Manchester. It was quite a good one, but not so delicate as the others, as the smallest amount that he (Dr. Fowler) had been able to detect with it was one per cent. Ferrocyanide of potassium, in connection with citric or acetic acid, he had found a delicate and reliable test, detecting .1 per cent. of albumen; and the same was true of tungstate of soda with an acidulated solution.

Quite recently, Dr. Oliver had introduced another test, which was altogether the most delicate that has yet been employed, viz., potassio-mercuric iodide with an acid, and it was capable of detecting .01 per cent. of albumen. The discovery of this test was not original with Dr. Oliver, but had been made by a French observer. The aim, in many of the later tests devised, had been to secure a method which could be easily practised at the bedside, and this had now been very satisfactorily accomplished by Dr. Oliver in the invention of his test-papers. There were two sets of slips of bibulous paper, one of which had been dipped in a saturated solution of citric acid, and the other in a saturated solution of potassio-mercuric iodide, and then allowed to dry. When the test was to be made, a slip of each kind was placed in a test-tube containing the urine, and as they dissolved, a precipitate would be observed to form in case albumen was present. With this potassio-mercuric iodide test, Dr. Fowler had found that almost every specimen of urine that he had examined contained at least a trace of albumen, or, at all events, some substance precisely similar in its qualities. It was a test, therefore, which could not be employed in life-insurance examinations, because it was certainly a question whether, in the great majority of cases in which he had tried the test, there was any diseased condition present. This was a matter which yet remained to be decided.

The President made a few remarks in regard to the significance of albumen when found in the urine, and said that he hoped this point would be taken into consideration in the discussion.

Dr. E. D. Hudson said that his interest in the subject was chiefly of a practical nature. While he had watched very carefully the current of medical literature in regard to the employment of new tests for albumen during the last few years, he was still strongly disposed to adhere to the old methods. The use of heat and nitric acid constituted, in his opinion, the most satisfactory tests for the busy practitioner. But even with these, there was need of the explicit instructions which Dr. Fowler had mentioned, and one very common mistake made, he thought, was the addition of nitric acid before the application of heat. He believed that it was a good rule to ascertain in all instances the chemical reaction of the urine by means of litmus paper before proceeding to test for albumen, and to add sufficient alkali or acid as the case might be, to bring the fluid to as nearly a neutral condition as possible. In cases in which there were any doubtful symptoms, it was a great mistake to dismiss the examination of urine simply because no albumen could be detected. In addition to repeated testing for albumen, repeated microscopic examinations should also be made. Heller's method often served an excellent purpose, and there was another admirable plan, which had been devised by Dr. Reuben A. Vance in 1868 or 1869. This was to take up in a pipette a little urine, and then a little acid, when, if any albumen were present, the precipitate would be seen at the junction of the two strata of fluids. Personally, he often tested simply with heat and ice-water. If, on the application of heat, a precipitate appeared which was caused by phosphates, the latter promptly disappeared when the test-tube was dipped in ice-water, the phosphates, as was well known, being redissolved by cold. In regard to some of the methods described in the paper, there seemed to him to be objections which confirmed him in the opinion that the older ones still continued the best for clinical purposes. Thus, the test-papers referred to, are too delicate, and the picric acid test required too much manipulation in order to secure freedom from errors.

Dr. Caspar Griswold remarked that there were two ways of looking at tests for albumen, one from a chemical standpoint, and the other from a clinical one. From the latter, that method was most desirable which presented the least chance of our mistaking some other precipitate for a deposit of albumen, and *vice versa*. With the picric acid test there were, apparently, a greater number of possible errors to be met with than in the case of most of the others. With regard to the potassio-mercuric iodide test, the question was, Is it desirable to find these very small quantities of albumen in the urine? If this test was a true one, a small quantity of albumen would really seem to be a normal constituent of the urine, and, at all events, albuminuria, in our modern view, was not regarded as such a serious condition as was formerly the case. On the whole, the old tests were probably sufficient for all clinical purposes. Although the application of heat might not detect such a minute quantity of albumen as some of the other tests, he thought it was the most reliable method, under ordinary circumstances, when the urine was clear. He was in the habit of pouring some of the urine to be examined into two tubes. That in one was boiled, while that in the other was not, and then the two were carefully compared; the tubes being always held against a black background. When the urine was not clear, he added one-fourth part liquor potassæ to it; after which he warmed and filtered it. Afterwards he employed Heller's cold nitric acid test. He believed, therefore, that the old

methods are really the best for the detection of albumen that was of clinical significance—if sufficient attention was given to the requisite details. However interesting a test might be in a scientific point of view, if we over-refined it to too great an extent we destroyed its practical value.

Prof. Charles A. Doremus said that he agreed fully with Dr. Griswold. Clean test-tubes and clear urine aided the medical practitioner more than very refined tests. Most of the urines submitted to examination were so turbid that it was difficult to test for albumen until they had been rendered clear. If Heller's method were employed, however, after treating the urine with an alkali, some degree of disturbance might be caused by the ebullition of a little gas, which would interfere with the delicacy of the test. In such cases, ferrocyanide of potassium and acetic acid were to be applied. This was an exceedingly delicate and satisfactory test; and metaphosphoric acid, which had not been mentioned this evening, was also a reliable one.

Dr. Munn said that he had had a very large experience in testing for albumen in connection with life-insurance examinations, but that he would speak of but a single point, and that was in reference to the very great importance of having a properly shaded light for the observation of the effect of the tests applied. Under ordinary circumstances no foreign bodies were visible in the air, but, as was well known, if a pencil of sunlight was allowed to stream into a room in a certain way, quantities of specks and particles of dust could be seen floating in it. So if the quantity of albumen was small it might entirely escape notice unless the test-tube was placed in the best possible light. The plan which he had adopted was the following: A dark window-shade was drawn down to the bottom of the window, and then held out a short distance from the sill, so as to allow the light to stream beneath it, while the test-tube was placed in front of a piece of black pasteboard fastened against the wall just below the window. By the adoption of this device he had sometimes been able to demonstrate to physicians the presence of albumen in the urine of patients in whose cases the tests made under ordinary light had previously failed to detect it.

Dr. Maxwell, another life-insurance examiner, said that when he first began to test urine for albumen he stuck to the old heat and nitric acid, and then adopted Heller's method in addition. For the last two years, however, he had principally employed picric acid, and recently he had also used sodium tungstate, combined with a small quantity of citric acid. He seldom relied on any one test, but as a rule resorted to three or four different ones in succession. Lately he had noticed in using picric acid in one instance, that a cloudiness was seen, which disappeared on the application of heat. After boiling the urine further, however, and then setting it away for twenty-four hours, the whole bulk became cloudy. Nitric acid and sodium tungstate indicated a small amount of albumen, but his first impression (from the action of the picric acid) was that it was a case of peptonuria. A specimen of this condition, however, he had not yet been able to find. He thought that the clinical significance of these later tests for albumen was not of great importance, since in every case in which any albumen at all was detected, microscopical examination would always be made for casts, and if they were found to be absent, the albumen would be regarded as of little consequence.

Dr. Fowler said, in conclusion, that the object of the paper had been to elicit such a discussion as that which had been carried on. He agreed with the last speaker, that reliance should never be placed on merely one test, and he usually resorted to the use of heat first himself. He could not agree with Dr. Griswold, however, that there was no use in going into unexplored fields in connection with this subject. A very minute quantity of albumen in the urine was sometimes of considerable clinical significance when the microscope showed the evidences of commencing renal disease. Again, it was only by such methods as those he had mentioned, that it could be ascertained whether a certain amount of albumen was not a normal constituent of the urine, since the minute quantities could not be detected at all by the old methods. In passing, he would state that peptonuria was really a condition sometimes found, and that he himself had seen undoubted examples of it—the appropriate tests showing plainly the presence of peptones.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, March 6, 1882.

The President R. A. Cleemann, M.D., in the Chair.

Dr. Wm. Goodell made the following

CORRECTION OF A MISSTATEMENT:

"At the last meeting of this Society, I made a misstatement with regard to that distinguished ovariotomist, Mr. Tait, which I greatly regret, and which I wish here to correct. I was misled by some remarks made by Dr. Sutton at the last meeting of the American Gynecological Society. These were so reported as to convey to my mind the impression that Billroth was the only European operator who did not refuse any case of ovarian tumor, however unpromising it was, and that Mr. Tait—to borrow Dr. Sutton's language—'does not remove many large tumors, those which weigh from sixty to sixty-five pounds, with extensive adhesions, etc.' In quoting this, by a careless slip of the pen, I changed the word 'many' into 'very,' and in addition I wholly misapprehended the purport of the above sentence. Dr. Sutton has since, in The Medical News, of February 23d, explained that he did not mean that Mr. Tait selects his cases, for he was 'not aware that this British ovariotomist refuses to remove a tumor because it is large;' but that 'Mr. Tait has the largest line of ovary and tube-cases, and the shortest line of big ovarian cysts, of any man I [Dr. Sutton] visited in Europe.' In making this correction here, I wish to repair the injustice which I unwittingly did Mr. Tait before this Society."

Dr. Goodell then exhibited an

EXTRA-OVARIAN CYST,

with the following history: The lady, æt. 28, and the mother of four children, had a miscarriage early in last October. At that time her family physician discovered the tumor. It slowly grew, but gave the lady so much inconvenience from pain and pressure that she was brought to his office late in the following December.

It was not large, but was very sensitive, and was diagnosticated to be an ovarian tumor. Both ovaries were removed early last February, and the lady recovered promptly. The peculiarities of the cyst were to him unique. The ovary lay to one side of a thick-walled cyst, and at such a distance from it that the cyst could have been removed without injury to the ovary. The latter was, however, extirpated along with the cyst, because it was diseased. Hitherto, all parovarian cysts which he had encountered were thin-walled and contained a clear fluid. But this one had thick walls and contained a turbid brown fluid. It started from the left broad ligament, and was adherent to the bladder, omentum, and abdominal wall. Another point of interest was the fact that the right ovary had doubled its size from follicular degeneration, and yet pregnancy had taken place.

Dr. Robert P. Harris suggested the possible existence of a third ovary as the starting-point of the tumor. He also thought that the presence of a third ovary might explain the persistence of the menstrual flow in some cases, after the operation of double ovariotomy.

Dr. Goodell also exhibited a

COCCYX REMOVED FOR COCCYGODYNIA.

The patient had met with a fall down stairs some years previously, and the injury was followed by a vaginal abscess of some kind. She had all the classical symptoms of a very bad coccygodynia, and had fallen into a nervous condition which bordered on insanity. Dr. Goodell had intended merely to sever the nervous attachments of the coccyx by the sweep of a tenotomy knife, but after the patient had been put under ether, the tip of the bone was found unnaturally movable, and giving distinct crepitation. The loose bone was therefore removed, and as the articulating surfaces were found rough and denuded, the whole coccyx was removed by bone-forceps. Great relief followed this operation.

Although he had seen very many cases of coccygodynia, this was the first case on which he had operated. In a very few traumatic cases he had wished to operate, but was not permitted to do so. The vast majority of these cases are, in his experience, those of nervous or neuralgic coccyx, and they get well in his hands under rest, massage, electricity, and appropriate constitutional treatment. The great difficulty, in cases of severity, is to decide between the nervous mimicry of the disease and pure traumatic coccygodynia, in which positive lesions have been sustained, and their effects have not yet passed away—as, for instance, in a sprained or a fractured coccyx, or in a rheumatic, a gouty, or an inflamed coccyx. There is yet another difficulty in the way of diagnosis, for sometimes an injury received in an hysterical woman is followed by local nervous phenomena, which will last long after the original lesion has been cured. For instance, on one occasion he had been so greatly deceived in the diagnosis between traumatic and nervous coccygodynia as to make him very cautious in resorting to the use of the knife. A highly intellectual lady, who spent her leisure in reading metaphysical works, received an injury to her coccyx by the sudden "bucking" of the horse on which she was mounted. She was at that time suffering from nervous prostration, and the blow started up very exacting coccygeal symptoms. Dr. Goodell found retroversion and a prolapse of both ovaries. These dislocations were remedied, and the patient put on a vigorous constitutional treatment; but she grew no better, and an operation was proposed and agreed to. As soon as the day and the hour were decided upon, she lost all pain in her coccyx, and has not since had a return of it. This happened about six years ago. On another occasion, he saw a very obstinate and severe case of coccygodynia, which he had been treating unsuccessfully for a long time, and which had a traumatic history, quickly disappear under an exciting family jar. In view of this experience, he believed it always safer at first to consider coccygodynia as a local expression of a general neurosis, and to treat it accordingly.

Dr. J. H. Packard asked why Dr. Goodell preferred the bone nippers to disarticulation in the first case.

Dr. A. H. Smith asked if Dr. Goodell had removed the entire coccyx. (Dr. Goodell was not sure, but thought so. There had been an abscess in connection with the injury, and the bone was dead and somewhat necrosed; he had cut off one piece with the nippers and then disarticulated the remainder.) Dr. Smith, continuing, said there had been suppurative action, probably following ankylosis. Such a condition might result from injuries received in labor, or from falling astride a chair-back or a rail. Most cases were reflex hysterical or uterine pains, as may be proved by the freedom from tenderness when the finger is pressed on the coccyx when making a vaginal examination. He has never removed one, because he has seen such poor relief from the operation in the cases that have come under his observation. Why should relief come unless all the nerves and other painful tissues be also removed? He will be glad to hear the result of the operation in the case reported by Dr. Goodell this evening.

CORRESPONDENCE.

COMPENSATION FOR EXPERT TESTIMONY IN IOWA.

To the Editor of The Medical News.

Sir: In an editorial in The Medical News of the 1st inst., entitled "Compulsory expert testimony without remuneration," you refer to Iowa as the "only State whose legislature has had the good sense to see that the true interest of the community requires that justice should be done to the medical expert."

I opine that the profession in Iowa would be happy if this were indeed true, but unfortunately it is not as relates to the present situation in this State. A later legislature has passed a later Act[1] than the one to which you refer, which provides the munificent remuneration of four dollars per diem to the physician called to give expert testimony *only*. Should he be unfortunate enough to be acquainted with any *facts* in the case, they may wring from him as many *opinions* as they like in addition, and his reward is that of the ordinary witness, and nothing more.

The absurdity of the last statement seems so great that I feel compelled to say that the Supreme Court

[1] XVI. General Assembly, 1876.

might not so decide, but the circuit judge in this circuit did, and based his decision on the ground that the law stated the expert was called *only* for expert testimony.

Yours very truly,

S. H. WASHBURN, M.D.

MASON CITY, IOWA, March 5, 1884

NEWS ITEMS.

DETROIT.

(*From our Special Correspondent.*)

THE COMMENCEMENT EXERCISES of the two medical colleges of Detroit are just finished.

THE DETROIT MEDICAL COLLEGE held its exercises in Whitney's Opera House, February 29th. Twenty-five men received the degree of M.D. In the evening, the Alumni of the College held their annual meeting. Following this was the banquet given by the Faculty and Alumni to the graduating class and their friends. All passed off in a most successful manner; peace and good will to all abounded on every hand.

THE MICHIGAN COLLEGE OF MEDICINE, on the evening of March 3d, held its commencement exercises in the same place. Twenty-seven diplomas were granted. After the exercises, the Faculty entertained their friends at a reception. At this, a harmony of feeling was verbally expressed between the three medical colleges of the State. To the outsider it was a most delightful thing to see brethren in the several medical colleges dwell together in unity. The Alumni of this college also, at a business and social meeting, elected officers for the coming year. It is stated that the matriculates of each college were about seventy-five.

THE SCHEME OF AMALGAMATING THE COLLEGES.—The efforts at the amalgamation of the two medical colleges in Detroit, which caused such a commotion last summer, have apparently subsided. Still, it is reported that the advocates of amalgamation are still at work, and hope in due time to accomplish their purpose. It is questionable whether they will succeed, as the three medical schools in the State represent at least three different modes of medical opinion—modes so different that a real union between them seems to an outsider impossible.

A STATE EXAMINING BOARD.—One of the speakers at a banquet given by one of the colleges suggested that, if a common State Examining Board be established, then every half dozen men, at such places in the State where it was convenient for them to do so, could organize a medical college, and thus secure for themselves the benefits of medical teachers' careers. Students could then be taught at or near their homes. As the classes would be small, each pupil could have the personal attention of each professor, and so to the utmost avail himself of the advantages of close contact with live teachers. In short, he thought that every doctor who so desired could then be a professor. By the State Examining Board, the work of the several bands of professors could be tested, and the really good teachers pointed out to the students.

He did not dwell upon the other effects of this scheme, only directing attention to the benefits it would confer upon the average medical practitioner in making him a professor. With a *proper examining board*, it would seem as if this scheme would be the best yet devised. Of course all these bodies would be permitted to advertise as medical colleges do, and so the powers and qualifications of every doctor in the country would become a household word with the people. It would not matter that many of these small teaching bodies had the most meagre apparatus for demonstrating the science and art of medicine. In fact, it would be very like what is now going on in a city not a thousand miles from the Ohio River. A medical friend lately related to us the results of a personal examination of this school. On paper this school has a very high standard, but as a fact our friend found that the lectures were delivered in the office of one of the professors, and that the number of students in attendance was exactly six at the time of his visit. As to dissecting-room, chemical laboratory, apparatus, diagrams, clinic rooms, etc., they were not yet developed. We have felt at liberty to direct attention to this matter, as it was openly presented by a gentleman who is a professor in one of the Detroit medical schools.

THE NEW HARPER HOSPITAL is nearly completed, at an expense of more than one hundred thousand dollars, exclusive of the ground upon which it stands. The funds for its erection and the grounds and its endowment were mainly supplied by three persons—a small farmer, a retired merchant, and a market-woman. The gifts of the two latter were made over twenty-five years since. Their gifts of city real estate have so increased in value that the trustees were enabled, from this increased value, etc., to erect the new building. It is the largest hospital building in the State of Michigan.

THE MEDICAL SOCIETIES of the city are in active operation. The Wayne County Medical Society and the Detroit Medical and Library Association meet twice a month, and the Detroit Academy of Medicine every week. The results of the work of each are apparent in the reports and papers published in the medical journals.

CINCINNATI.

(*From our Special Correspondent.*)

MEDICAL COLLEGE OF OHIO.—The commencement exercises marking the close of the sixty-fifth annual session at this institution, were celebrated Friday evening, March 7, in Music Hall. The graduating class numbered one hundred.

The exercises were opened with remarks by the Dean, Prof. W. W. Seely, M.D., who assured the friends of the College of its continued prosperity, and called attention to the advancements made in the practical departments, and the improved facilities now afforded students for both didactic and clinical instruction.

The Hon. Flamen Ball, President of the Board of Trustees, then conferred the degree upon the applicants, reminding them briefly of the importance of the profession they were entering, of the arduous and responsible duties it entailed, and of their obligation to maintain its honor.

The valedictory address was delivered by Prof. P. S. Conner. He compared the present standard of medical education with what it was twenty-five years ago, and with what it ought to be. He said that, while no one

appreciated more than he did the advantages of a thorough preliminary education, he did not think that it should be considered a prerequisite to the study of medicine. Many men who have not had the opportunity to obtain a classic education are still capable of becoming competent physicians, and may in after-life gain much of what they could not get before entering the profession. The difficulty should be not in getting into the medical school, but in getting out. A uniform lengthening of the course of study to three or four years is also to be desired; but even in this a great deal depends on the student, some being capable of acquiring in two or three years what others require a much longer time to attain. Again, there always have been and always must be, schools of different grades. It is impossible for all to attain an equal degree of perfection.

One thing that is greatly needed, he said, is the placing of our colleges upon the basis of a substantial endowment, as has so advantageously been done in New York and Philadelphia, and more recently in the Johns Hopkins University at Baltimore.

A banquet was given by the Faculty in Dexter Hall, at the close of the exercises.

The Alumni Association.—The meeting of alumni in the afternoon was largely attended.

The annual address was delivered by Dr. George T. Sutton, of Lawrenceburg, Indiana; his subject, "Changes in the Form of Diseases in the Ohio Valley."

Dr. David D. Beck, of Cincinnati, read a paper on "Color Blindness," presenting many important points in regard to principles that should be known to railroad men and water-craftsmen.

The following officers were elected:

President.—Dr. Isaac V. Gard, of Gresaville, O.

Vice-Presidents.—Drs. W. W. Dawson, of Cincinnati; Horace Coleman, of Troy, O.; W. L. Richards, of Ky.; James M. Davis, of Ind.; Joseph Aub, of Cin.

Secretary and Treasurer.—Dr. J. M. French, of Cin.

Corresponding Secretary.—Dr. A. G. Drury, of Cin.

Miami Medical College.—The commencement exercises of the twenty-fourth session of this institution took place Thursday evening, March 6.

Dr. William Clendenin, Dean, delivered the opening address, in which he invited attention to the prosperous condition of the College, even during the past year, in which so many schools have suffered a great diminution of numbers in attendance.

The degree was then conferred by the Hon. Jacob D. Cox, President of the Board of Trustees, upon the twenty-eight members of the graduating class.

The valedictory address was delivered by Prof. W. H. Taylor, who took as his subject, "The Relation of the Medical Profession to the Community." He said that the special knowledge of the physician places him under obligations to the community higher and nobler than simply his personal relations to his patrons.

At the close of the exercises, a banquet was given by the Faculty at the Burnet House.

Alumni Association.—The Alumni met Thursday afternoon. Dr. Daniel Millikan, of Hamilton, Ontario, President of the Association, delivered an address on the researches made by physicians in the various other departments of science and art, as well as in medicine.

Dr. John G. Smalley delivered the valedictory on behalf of the graduating class.

The following officers were elected:

President.—Dr. E. M. Nelson.

Vice-Presidents.—Drs. F. H. Rowe, E. S. Ricketts, W. W. Hall, and J. E. Brown.

Secretary.—Dr. W. H. Falls.

Treasurer.—Dr. G. M. Allen.

Executive Committee.—Drs. W. A. Dun, J. F. Heady, and P. Zenner.

The Cholera Bacillus Discovered in a Calcutta Water Tank.—We are informed that the discovery, by Dr. Koch and his colleagues, of cholera bacilli in a tank in the Baliaghatta suburb of Calcutta has excited much interest in Calcutta, and is there regarded as clearly a great step forward in medical science. This has occurred since the date of Dr. Koch's fifth and last report, which appeared in our columns last week.

University of the City of New York.—The forty-third annual commencement of this University was held on Tuesday evening, March 11, and the degree of M.D. was conferred on one hundred and sixty-four graduates.

The Medical College of South Carolina held its Annual Commencement on Saturday evening, March 1st. Dr. J. Ford Prioleau, the Dean of the College, read his Annual Report to the Faculty and Board of Trustees of the College, in which he stated that two years ago the Faculty instituted a graded course, extending over three sessions of attendance, available to those who wished it; the plan has been successful, and several of those who would probably have presented themselves at this time for diplomas, have postponed their graduation for another year.

The Faculty have rigidly insisted upon the period of three years being devoted to the study of the profession, inclusive of two sessions of collegiate exercises.

The degree of M.D. was conferred upon twenty candidates, and that of Phar.D. upon three candidates.

Regulation of the Practice of Medicine in Maryland; Contemplated Legislation.—A bill has been recently introduced into the Maryland Legislature, by which the State Board of Health will become, under the new *régime*, the Examining Board for the State. All graduates of reputable medical colleges, no matter as to the school to which they belong, will be entitled to practise upon presenting their diplomas and obtaining proper certificates. All persons who shall have practised medicine for ten years, upon making affidavit to that effect, shall receive a certificate entitling them to practise. Those not possessing the above qualifications shall undergo an examination at the hands of the Board, and, if the result be satisfactory, shall receive a certificate from the Board entitling them to practise. Persons undergoing examination in accordance with the Act, will be required to pay $10 to the Board. The examinations may be in writing, and shall be "of an elementary and practical character," embracing the subjects usually taught, including pathology and pathological anatomy. Itinerant physicians must pay to the sheriff $50 for each month, under the penalty of being fined not less than $50 nor more than $500, or impris-

onment from one to twelve months.—*Maryland Med. Journ.*, March 1, 1884.

DICTIONARY OF PRACTICAL SURGERY.—Messrs. Smith, Elder & Co., of London, announce a *Dictionary of Practical Surgery*, to be edited by Mr. Christopher Heath. It will be published on the plan of Quain's *Dictionary of Medicine*, which has been so favorably received by the profession.

SANITARY COUNCIL OF THE MISSISSIPPI VALLEY.—The sixth annual meeting of the Sanitary Council of the Mississippi Valley will be held in the city of Memphis, Tennessee, on Friday, March 21, 1884, instead of on Wednesday, March 19th, as previously announced.

AN AUTHOR'S RIGHTS IN HIS LECTURES.—A case has recently been pending in the Scotch law-courts, the decision in which involved the question of the rights which university professors have in their delivered lectures. Judgment has been given, and the Court holds that professors are fully entitled to the benefits of the Copyright Acts; and that the mere delivery of the lectures to a class, each member of which has paid a fee to listen to them, does not in any way affect the lecturer's right of property in them, nor does it in any way give another person the right to publish or reproduce the lectures. In the present case, the action has been raised by the Professor of Moral Philosophy in the University of Glasgow against a local bookseller, who offered for sale a book entitled *An Aid to the Study of Moral Philosophy*, which was wholly or in substance a reproduction, more or less correct, of the lectures delivered by Professor Caird to his class in moral philosophy. With the view of still further protecting Professor Caird's interests, the judge gave him the full benefit of the Copyright Act, and not only bound over the defendant to stop the publication of the book in dispute, but ordered him to deliver up all the copies remaining in his hands, or within his control, in order that they might be destroyed. This decision is an authoritative statement upon a point of some importance, and about which there has heretofore existed some difference of opinion.—*British Medical Journal*, March 1, 1884.

EDINBURGH UNIVERSITY TERCENTENARY.—The following programme has been issued of the ceremonies by which the close of the Three Hundredth Session of the Edinburgh University will be celebrated. The festival is to extend over Wednesday, Thursday, and Friday, 16th, 17th, and 18th of April. It is proposed that on Tuesday evening a grand reception shall be given by the Magistrates and Council in the Museum of Science and Art. On Wednesday, the new College Buildings will be formally opened, and it is understood that the Senatus are endeavoring to get a member of the Royal family to undertake this duty. The proceedings on this day will begin with a reception by the Senatus in their hall, then there will be a religious service in St. Giles's, and afterwards the opening of the College Buildings will take place. On Thursday, or on one or other of the specified days, there will be a graduation ceremonial, at which a number of honorary degrees will be conferred. On Thursday evening there will be a grand banquet, probably in the Corn Exchange; on Friday afternoon a students' concert, and on the evening of that day a ball. It is not unlikely that in connection with the celebrations an illumination of the principal streets of the city will be recommended by the Magistrates and Council, though this has not been finally determined.—*Medical Times and Gazette*, Feb. 23, 1884.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending March 1, 1884, indicate that inflammation of the bowels has increased, that influenza has considerably decreased, and that pneumonia, intermittent fever, bronchitis, rheumatism, diarrhœa, remittent fever, and inflammation of the kidney, have decreased in area of prevalence.

Compared with the average for the month of February in the six years, 1877 to 1882, neuralgia was more prevalent, and pneumonia, diphtheria, bronchitis, remittent fever, typho-malarial fever, and rheumatism were less prevalent in February, 1884.

Including reports by regular observers and others, diphtheria was reported present during the week ending March 1st, and since, at ten places, scarlet fever at twenty-two places, and measles at seven places. Four cases of smallpox were reported at Bath, February 29th.

OBITUARY RECORD.—DR. MENDEZ ALVARO. On the 9th of December, 1883, a large number of physicians of Madrid and the provinces celebrated the fiftieth scientific anniversary of Dr. Mendez Alvaro; ten days later he died. Dean and Founder of the Spanish School of Hygiene, President of the Royal Academy of Medicine, and Director of *El Siglo Médico*, Dr. Alvaro was the author and editor of numerous works, the first, a manual on auscultation, having appeared in 1835. The professional and scientific interests of medicine in Spain had always in him a warm advocate and supporter. He was a distinguished savant, a learned writer, and a good man.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 4 TO MARCH 10, 1884.

PERIN, GLOVER, *Lieutenant Colonel and Surgeon.*—Medical Director, Department of Dakota, leave of absence extended twenty days.—*S. O. 23, Headquarters Division of the Missouri*, March 5, 1884.

BILL, J. H., *Major and Surgeon.*—Granted leave of absence for one month.—*Par. 1, S. O. 20, Headquarters Department of the Platte*, March 3, 1884.

BACHE, DALLAS, *Major and Surgeon.*—Leave of absence extended seven days.—*Par. 1, S. O. 43, Headquarters Department of the East*, March 5, 1884.

STEPHENSON, WILLIAM, *First Lieutenant and Assistant Surgeon.*—Ordered to Fort Niobrara, Nebraska, for temporary duty, on completion of which to return to his station, Fort Omaha, Nebraska.—*Par. 4, S. O. 20, Headquarters Department of the Platte*, March 3, 1884.

FISHER, WALTER W. R. and PALHEMUS, ADRIAN S., *First Lieutenants and Assistant Surgeons.*—Assigned to duty in the Department of California.

STEPHENSON, WILLIAM, BORDEN, WILLIAM C., and CHAPIN, ALONZO R., *First Lieutenants and Assistant Surgeons.*—Assigned to duty in Department of the Platte.

ROBERTSON, REUBEN L., and EDIE, GUY L., *First Lieutenants and Assistant Surgeons.*—Assigned to duty in Department of Texas.

CROSBY, WILLIAM D., *First Lieutenant and Assistant Surgeon.*—Assigned to duty in Department of Arizona.

GAUDY, CHARLES M, *First Lieutenant and Assistant Surgeon.*—Assigned to duty in Department of the East.

PILCHER, JAMES E., *First Lieutenant and Assistant Surgeon.*—Assigned to duty in Department of Dakota.—*Par. 4, S. O. 55, A. G. O.*, March 6, 1884.

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ORIGINAL LECTURES.

ON THE TREATMENT OF TYPHOID FEVER.[1]

A Clinical Lecture.

BY PROF. DUJARDIN-BEAUMETZ,
OF PARIS.

GENTLEMEN: There is, perhaps, no question in therapeutics which has caused so much discussion as the treatment of typhoid fever, and, if I were to follow out all the lines of inquiry which this subject has opened, I should require, not one lecture, but the entire course. I shall, then, be as brief as possible on points of theory, and dwell rather on practical conclusions. Whether you practise in the country or in the city, you will continually meet with cases of abdominal typhus. Last year (1882) you saw our wards filled with the victims of one of the most severe epidemics that have ever afflicted the population of Paris, and the hall of the Academy of Medicine still rings with the passionate discussions which were raised by the various questions pertaining to this great problem of hygiene and therapeutics.

Etiology, as I have often told you, has an important bearing on the treatment of disease; you recognize, then, the propriety of considering first the causes of typhoid fever; for, if they were absolutely known to us, we should be able henceforth to establish on a scientific basis the prophylactic treatment of this disease. This particular point in the study of dothinenteritis has been especially investigated during the last few years, and we shall have here to discuss the contagiousness and spontaneity of this affection. According to some authorities, typhoid fever is always the result of a particular contagion; according to others, it comes from a miasmatic poison. You cannot be ignorant, Gentlemen, of the difference which separates *contagium* from *miasm*, a distinction well established by Liebermeister; *contagium*, coming from specific, morbific agents, which always take their origin and undergo development in a diseased organism; *miasm*, on the contrary, being generated outside of, and independent of, an infected organism. To make more orderly and clear the exposition of this difficult subject, I shall commence with points which are best established and least open to dispute; then I shall take up those which are most amenable to discussion.

To-day, everybody is agreed in admitting the contagiousness of typhoid fever. It is especially in our rural districts that this contagion is observed in its worst form, and every year the reports made to the Academy of Medicine on the prevalent epidemics contain facts establishing the contagiousness of this disease. We can go even further, and declare that to-day the active principle of this contagium has been determined. This principle is found exclusively in the stools of typhoid patients, and it needs but a very minute quantity of this pernicious element in potable water to communicate ileo-typhus to all who drink of it. We possess, to-day, a considerable number of observations which establish this fact on an undisputable basis. The latest and most accurate is, assuredly, the observation published by Dionis des Carrieres, concerning the epidemic which lately devastated the city of Auxerre, where one of the springs which supply the city was proved to have been polluted by the dejections of a woman sick with typhoid fever. The entire population which derived its drinking water from this source was infected, and there were few that did not suffer more or less; those parts of the city, however, which did not make use of this water had entire immunity from the epidemic.

The attempt has been made by experiments on animals to elucidate this subject, but these have given uncertain results, and to the positive experiments of Birch-Hirschfeld, of Letzerich, and of Tizzoni, we must oppose the negative results of Robert Bahrd and Motschutkoffsky; moreover, the basic premise of these researches is under dispute, for it is not proved that the lower animals can contract typhoid fever.

But it is not enough to know that it is by the dejections that typhoid fever is communicated. Pathologists, guided by the theories of Pasteur, have sought in the dejections, and even in the tissues of victims of the disease, the microbe which contains the contagious principle. Unfortunately, we have not here any positive information; not because micro-organisms are not exceedingly abundant in the stools of typhoid patients, but because amid this abundance it is difficult to tell exactly which one of these microbes is the essential element of dothinenteritis. It is generally known that Recklinghausen has found micrococci, Eberth rod-like forms, and Klebs has described, under the name of *bacillus typhosus*, certain elongated filaments; but despite these researches, and those of Koch, of Meyer, of Friedlander, of Maragliano, of Almquist, we are still ignorant of the real microbe of typhus abdominalis. In a word, the parasitic theory of typhoid fever is almost certain, but it has not yet been scientifically demonstrated in a rigorous manner.

As opposed to this doctrine of contagiousness, we must allude to that of spontaneity. Struck by the fact that typhoid fever exists endemically in all places where are accumulated a great number of individuals—as in our great city; moved also by the appearance of certain epidemics apart from all known contagion; comparing, moreover, the typhus of armies with the abdominal typhus of great cities, certain authorities have maintained that typhoid fever may be produced spontaneously under the influence of bad hygienic conditions; and the cause has been by turns assigned to fecal matters, overcrowding, spoiled alimentary substances, and even to certain bad geological conditions of the soil. Let us rapidly examine each of these points.

Murchison has been the chief defender of the first of these causes, and he has labored to show that fecal

[1] Translated from advance sheets by E. P. Hurd, M.D., of Newburyport, Massachusetts.

matters may spontaneously develop a miasmatic principle which, entering the human system, may engender there ileo-typhus. Between him and Budd quite a lively discussion arose; Budd maintaining that fecal matters were dangerous only when they were fouled by the dejections of a typhoid patient.

These are the two so-called fecal theories of typhoid fever. It was, however, a mistake to confound these theories under one name, for if Budd's view be correct, Murchison's cannot be; for it is not yet rigorously demonstrated that fecal matters may spontaneously generate the typhoid poison. This fecal theory has served as argument to the adversaries and to the partisans of the exclusive sewerage doctrine, which condemns the fixed privy-vaults and the separate systems of removal, and insists that all night-soil shall be consigned to the public sewers, which shall be constantly flushed with running water—the latter, with its excrementitious products, being finally subjected to the filtering and purifiying action of the soil. This whole matter of sewerage is not yet settled; yet despite the opposition in certain quarters, the majority of hygienists and civil engineers are of opinion that those cities which have the best system of sewerage are the best protected from typhoid epidemics.

I do not wish to enter into the details of this discussion, which would draw us away from our subject. I shall only call your attention to the action of oxygen on all putrescent materials floating in sewers—an action which Fauvel has clearly shown in making it plain that this oxidation is a veritable combustion, which rapidly destroys the infectious element in night-soil; and we see in this an explanation of the fact that the South and East, despite their deplorable hygienic conditions, manage (by free exposure of their filth to atmospheric air) to keep tolerably free from epidemics. Although Rochard has affirmed that it would be easy to develop typhoid fever by the simple fact of massing people together in close quarters and under bad hygienic conditions, I believe that this overcrowding is a more powerful factor of typhus exanthematicus than of abdominal typhus. I make the same reserves in reference to the subject of alimentation as the determining cause of ileo-typhus. Wernich, comparing the bacillus of typhoid fever with that of putrefaction, has ably maintained that the use of spoiled meats is a cause of typhoid fever. It has also been asserted that the use of water polluted by organic detritus, and that even milk contaminated by water of bad quality, might also be a cause. I consider all these circumstances as adjuvants; but no one of them alone seems to me sufficient as a determining cause of this disease. It is the same with geological conditions. The doctrine which is supported by Pettenkoffer and Buhl, attributes epidemics of typhoid fever to a lowering of the stratum of subterranean water. Observations have in fact demonstrated that if this theory is conformable to what has been observed at Munich, it is not applicable to epidemics in other parts of Europe.

As you see, Gentlemen, it is not yet proved that any of the causes just alleged may spontaneously give rise to typhoid fever; and I am ready, for my part, to give my adhesion to the parasitic theory of this affection. It is true that this doctrine of *contagium vivum* denies all spontaneity, but it enables us to explain—thanks to the theory of vaccination (or, if you prefer so to put it, of preservation by attenuated virus), it enables us, I say, to explain the immunity of typhoid patients from all future attacks of the disease. It enables us, also, to understand the comparative immunity of individuals who have long lived in Paris as contrasted with those who have lived there but a short time; the first having acquired, by long exposure to the virus, constitutional modifications which prove a relative protection.

It enables us, moreover, to hypothesize atmospheric or telluric conditions, favoring in some degree the culture of germs of the typhoid contagion, without being compelled quite to indorse the explanation which Ernest Besnier has given of the march in accordance with seasons of the dothinenteric epidemic. But, on the other hand, this theory of living contagium leaves in the shade many points in this interesting part of etiology, and in particular the epidemic character of this affection, and the special features which distinguish each epidemic—circumstances which render so difficult the application of statistics to the study of the therapeutics of typhoid fever. Nevertheless, despite these reserves, I adopt the theory of contagium rather than that of miasm.

From the facts which I have just set forth, flow very important hygienic applications, some concerning public hygiene, into the consideration of which I shall not enter, others concerning private hygiene, and which in their totality constitute the hygienic and the prophylactic treatment of typhoid fever. As it seems to be absolutely proved that the typhoid virus is found in the fecal matters of persons suffering from the disease, and that water polluted by these dejections is the most powerful factor of the contagion, it follows that it is a duty thoroughly to disinfect these alvine dejections, and the objects which they have polluted. It follows, also, that one should have a careful surveillance of potable water, and, if not certain of its purity, such water should be boiled before being used, or some of the table waters should be employed, such as Apollinaris. Moreover, I refer you in this connection to the instructions issued by the Council of Hygiene, of which I am a member, concerning the measures to be taken to stay the progress of the epidemic of typhoid which raged over this city in 1882.

So much for the prophylactic treatment. The hygienic treatment is of capital importance, and the more you see of this disease the more you will appreciate its importance. Under this head I shall examine, successively, the dietary regimen, the measures to promote cleanliness, and the care of the sick-room.

For the severe and cruel regimen of Broussais, who opposed feeding fever patients, we now substitute the administration of nourishment as a necessary part of the treatment, and no disease so markedly shows the advantages of generous alimentation. You must, then, feed your typhoid patients; but, remembering the disorders of which the digestive tube is the seat, you should exercise great care in the choice of nourishment, which should be chiefly liquid; and every substance should be prohibited which might become a source of irritation in the alimentary canal. Give your patients, then, milk, broths, well-strained gruels, and stimulating drinks, such as wines and vinous lemonades. These beverages constitute the only drinks permissible. I make exception of plain lemonade, a beverage which, without possessing any marked anti-febrile properties, is always refreshing to fever patients. When there exist gastric disturbances, and you wish to support the patient, you may give iced

champagne. It is generally a good thing to add ice to the ordinary drinks of the patient.

But the time when you should redouble your watchfulness is when you come to the convalescing period of the disease. During convalescence, the patient either has a ravenous appetite or he has no appetite at all. Where appetite exists and is imperious, you will have to exercise rigorous care in prohibiting too free indulgence in all kinds of food. For my part, I have three or four times in my life seen convalescent patients die from excessive eating. I remember well a patient in the Hôtel Dieu, where I was attending, who was convalescing from a very severe attack. He went out of the hospital, and the first thing he did was to help himself to a hearty meal. The next day he came back to the hospital with all the symptoms of peritonitis, from which he died. The autopsy revealed an intestinal perforation. You should have such facts always in mind when you direct the dietary of fever patients during their convalescence, and although the instinct for food at such times is a natural one, the utmost judgment is required in its gratification.

In other cases, there are anorexia, vomiting, and dyspepsia; symptoms which, as our colleague, Anatole Chauffert, has well shown in his thesis on the gastric complications of typhoid fever, depend on the alterations which the gastric mucous membrane has undergone from the typhoid process. Here we must apply all the measures which are addressed to the treatment of ulcerous gastritis—a diet of pure milk, which gives rest to the enfeebled stomach, milk punch with meat powder; this is an excellent way of giving this highly nutritive preparation. It may, finally, be necessary to resort to lavage of the stomach and to forced feeding.

It is not enough to support your patients; there must be the most scrupulous care about cleanliness, and it will not do to allow them to be defiled by their urine or alvine dejections. In the curious and interesting narrative which Dr. Stewart has given of his personal experiences in an attack of typhoid fever, he alludes to the disagreeable sensations which the delirious patient suffers from the wet, soiled underclothing in contact with his body, as well as from intense light and loud noise. You can promote this cleanliness of the person and the healthy action of the skin by frequently bathing the entire surface with cold or tepid water containing a little thymol or antiseptic vinegar. These lotions not only keep the patient clean, but they also lower the temperature and diminish that sensation of heat and dryness so painful to fever patients. These antiseptic spongings should be repeated two or three times a day.

As for eschars and ulcerations of the skin, they may be prevented by frequently changing the position of the patient, who must not be allowed to lie all the time on his back; and it is always a good plan, where the patient can afford it, to have the bedclothes upon which he lies made of silk instead of cotton, or else to provide him with a water-bed.

Your attention ought to be called to the condition of the mouth and throat of these patients—a matter of considerable importance. You should urge the attendants several times a day to cleanse the teeth and gums of the sordes which collect upon them, and you must insist that they keep the tongue moist; there is nothing better for this purpose than the alkaline waters of Vichy and Vals. This dryness of the tongue is one reason why it is so hard for the typhoid patient to talk, and you can only rid him of this inconvenience by cleansing applications and gargles.

You have seen the great importance which is placed on disinfecting the stools of typhoid patients. These dejections, beside the contagious principle which they contain, have a marked gangrenous odor, which poisons the room of the patient; there is, then, a double necessity for prompt disinfection. You can accomplish this by allowing the fecal matters to be passed in a vessel containing a certain quantity of a two per cent. solution of the sulphate of zinc, copper, or iron, and in taking care also to cleanse with the same solutions all water-closets receiving these dejections. Lavements—and I speak here only of disinfectant lavements—have also the same object. One of the best and most inoffensive is that recommended by Bouchard, and which consists of a mixture of powdered charcoal in water, in the proportion of two or three spoonfuls to the pint. These lavements cause no trouble, and have the advantage of destroying the nauseous smell of the fecal matters.

You should also examine with great care the urinary functions of your patients. You know, in fact, how frequent is retention of urine in typhoid patients, and that, in consequence of the delirious condition in which they are plunged, they are frequently unable to express their natural wants. You should, then, frequently examine the abdomen, and resort to catherization when you find that the bladder is not thoroughly emptied.

It is not everything to have directed the alimentation of your patient, to have minutely indicated all the pains that should be taken for cleanliness and disinfection; you must also furnish indications no less precise concerning the ventilation of the sick-room. You should choose a room which is well aired and ventilated, and place the bed of the patient in the middle of this room; the bed should be narrow, moderately elevated, and divested of curtains and all canopy, so that the attendants can readily and rapidly wait on the patient. If in your power to do so, you should choose two rooms adjoining each other, so that the patient may alternately be transported from one to the other. You should allow but a modicum of light to enter this room, and no lamp should be kept burning in the night-time. Strong light is painful to the typhoid patient and favors the delirium. But few persons ought to remain in the room; one commonly suffices. Urge on the attendants the importance of keeping silence, and if they must converse, let them do so in an undertone. Stewart, in the narrative of which I have just spoken, dwells much on the painful sensations which he experienced when loud conversation was going on in his room.

Generally, the delirious manifestations do not acquire a high intensity; nevertheless, there are cases in which there exists a veritable delirium of action, and which necessitates forcibly keeping the patient in his bed. It is best in these cases, as far as possible, to accomplish this by the aid of the persons who attend the patient, and not to resort to rigorous measures of restraint, such as the strait-jacket, unless other means fail. By the strangulation which it imposes, by the absolute and continuous dorsal position which it necessitates, by the pressure which it exerts on the thorax—the strait-jacket favors

the visceral congestions so frequent in this fever, and may even be a cause of death, as I have several times witnessed in my hospital service.

Apropos of this typhoid delirium, and without departing at present from the hygienic ground which we now occupy, I cannot too much recommend you to cut the hair of your patients, especially in the case of young females, who are apt to have long, thick hair. This is the more needful where there is much mental disturbance. I have often observed considerable improvement in the delirious manifestations by cutting the hair; and this cannot be much of a sacrifice to patients who reflect that their hair will all fall out during the course of convalescence.

You will, perhaps, think, Gentlemen, that I have gone into too many little details about the hygienic management; but all these points have their importance, and I can affirm that typhoid fever well *nursed* is half cured. The necessity of careful attention to hygiene is exemplified in the difference in mortality which obtains between hospital and private practice; for in our hospitals we are not able, by reason of the peculiar conditions in which we are placed, and especially from want of sufficient nurses, to apply these hygienic rules as thoroughly as we would like. Therefore, I earnestly recommend you in your private practice to attend scrupulously to the minor as well as the major details of hygiene. How many severe typhoid cases have I seen which owed their recovery to these hygienic means alone, and to the faithful services of some friendly attendant—rendered with that devotion and that self-sacrifice which are only to be found in the bosom of the family!

(*To be continued.*)

ORIGINAL ARTICLES.

THE OINTMENT OF BOROGLYCERIDE (UNGUENTUM BOROGLYCERIDI).

BY L. WEBSTER FOX, M.D.,

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THE following remarks, relative to the use of unguentum boroglyceridi in certain ocular diseases, are based on an extended experience of over one year, during which time many cases have been treated. The following is the formula for making the ointment:

℞.—Boroglyceride, 50 per cent. solution in glycerine, ... ℥ij.
Vaseline, ... ℥vj.
Ol. rosæ, ... q.s.—M.

Heat the boroglyceride, and, while hot, add it slowly to the vaseline, stirring constantly until thoroughly mixed. To this formula may be added mydriatics, myotics, and the stronger astringents. I have in my possession samples of the ointment containing atropiæ sulph. gr. iv to ℥j, hyoscyamiæ sulph. gr. ij to ℥j, homatropiæ hydrobrom. gr. ij to ℥j, eserin. sulph. gr. ij to ℥j, cupri sulph. gr. ij to ℥j, aluminis pulv. gr. vj to ℥j, and zinci chlor. gr. ij to ℥j. These samples were prepared by Evans, Druggist, 1104 Chestnut Street, August 1, 1883, and have remained pure and sweet, preserving their consistency, and the power of the suspended drugs unaltered.

The advantage claimed for the ointment over the boroglyceride in solution, in ocular therapeutics, is that it can be more easily applied to the eyes of children by the untrained hand; also, that we have a vehicle in which we can combine two drugs, one having a mydriatic (atropiæ sulph.) as well as an irritating effect on the conjunctiva, the other (boric oxide) astringent qualities. It is the experience of every ophthalmic surgeon that an aqueous solution containing a suspended drug, standing in a warm temperature for several days, soon becomes filled with a fungus. A careful ophthalmic surgeon would hesitate to apply such liquids to an ulcerated cornea, or even where there is conjunctivitis. The continued use of a solution of atropia will often excite an acute conjunctivitis and excessive dryness of the throat or erythema of the face, and in a very few cases marked atropia poisoning. By using the atropia suspended in the boroglyceride ointment, we escape these troubles. The boric oxide, being an astringent, counteracts the irritating properties of the atropia, the vaseline closing the mouths of the canaliculi, thereby preventing the atropia being carried through the lachrymal canal to the throat. The atropia is also, on account of the closure of the mouths of the canals, retained longer in the palpebral sacs, hence a more thorough dilatation of the pupil and paralysis of the ciliary muscle are obtained with a lesser quantity of the drug.

In certain purulent diseases of the eye I prefer the boroglyceride in glycerine.[1] The following ocular troubles respond favorably to the action of the ointment when applied in a quantity about the size of a split-pea every three hours.

1. Ulcers of the cornea when arising from anæmia.

2. Phlyctenular ulcers both of cornea and conjunctiva.

3. Ulcer rodens due to infection, and ramolissement of the cornea due to pressure or exposure.

4. Marginal ulcers of the cornea found in strumous children; here the addition of eserin. sulph. (gr. ij to ℥j) hastens the reparative process.

5. Trephined ulcers (central) in children, and ulcers of the cornea in old individuals, and corneal infiltration with pus.

6. *Not* in abrasions of the cornea after removal of foreign bodies, nor in recent wounds of the cornea or sclerotic, either with or without prolapse of the iris.

7. In astigmatic keratitis; accompanying this affection we have supra- and infra-orbital pain, and at times temporal reflex,[2] either of which is a diagnostic symptom. The addition of atropiæ sulph. (gr. iv to ℥j) renders the action of the ciliary muscle passive, which being the exciting factor, relief is at once experienced. The ametropia must

[1] See THE MEDICAL NEWS, May 26, 1883.
[2] Ibid., March 8, 1884.

be corrected, or the patient will have recurrent attacks.

8. In granular lids of young persons, complicated with pannus, the addition of atropiæ sulph. (gr. iv to ℥j) or of cupri sulph. (gr. ij to ℥j) is of the greatest value when we have the condition known as keratitis trachomatosa present.

9. In blepharitis marginalis, eczema of lids, and conjunctivitis; not, however, when there is excessive lachrymation present in the latter trouble. In these cases, the boroglyceride solution in glycerine (fifty per cent.) is preferable. The glycerine being hygroscopic has an affinity for water, the boric oxide being precipitated at once stimulates the diseased condition to healthy action, and relief soon becomes manifest.

In ophthalmia neonatorum, a fifty per cent. solution of boroglyceride in glycerine is applied every two hours (*ad. lib.*), and an ointment of boroglyceride applied to the margins of the eyelids at night.

When applying the boroglyceride in solution, care must be observed in separating the eyelids; this can be done with lid-retractors. In elevating the lids with the retractors, a pouch is made which can be filled with the solution.

An excellent and cheap retractor may be made of a hairpin; curve the looped end to a right angle with its tines. This instrument is safer than the lid-retractors usually found in the ophthalmic instrument case, and is always at hand.

When the corneæ become hazy or opaline in ophthalmia neonatorum, use the ointment containing eserin. sulph. (gr. ij to ℥j) every two hours; a piece the size of a split-pea is to be applied, in addition to the solution of boroglyceride. By following this mode of treatment, the most troublesome cases are cured in a very few days.

My friend, Dr. D. N. Dennis, who has had extended experience in the use of the drug in the treatment of ophthalmia neonatorum, has very kindly placed at my disposal the clinical notes of one of his cases recently treated in private practice.

"On the the sixth day[1] after birth, a purulent discharge was first noticed; the eyelids were œdematous and swollen. The following treatment was at once instituted. The eyes were thoroughly cleansed with tepid water, and a thirty-five per cent. solution of boroglyceride in glycerine was dropped into each eye every two hours (enough to fill the conjunctival sac). The first noticeable change for the better was about thirty hours after the treatment was commenced. The œdema and swelling had greatly decreased, the pus had lessened in quantity, and the eyes looked in better condition generally. The treatment was continued. After its thorough use for three days, it was found that the purulent character of the pus had changed. The solution was then instilled into the eyes every four hours instead of every two; this was continued for several days, when the discharge of pus entirely stopped, and, with the exception of some redness of the conjunctiva, the eyes were in a healthy condition."

As boroglyceride is a most valuable therapeutic agent in other fields of medicine, I have asked my friend Dr. Granville Faught, who has a large and varied field in which to make investigations, to contribute for the benefit of the general practitioner, especially those physicians living remote from the medical centres and inland, his experience with the drug in general practice.

Dr. Faught writes: "It is now nearly two years since Dr. Fox and I commenced the use of boroglyceride in the wards of the Germantown Hospital. Since resigning my position as resident physician in the above-named institution, I have continued its use not only in private practice, but also in the out-patient department of one of the largest charity dispensaries of this city, and it is on this extended experience we base our remarks. Boroglyceride is a non-crystalline, amber-colored, vitreous substance, insoluble in water and alcohol, but very soluble in glycerine. It is formed by heating sixty-two parts of boracic acid and ninety-two parts of glycerine until it ceases to lose weight, which will be when it has lost about one-third. It appears to be, strictly speaking, a saturated solution of boric oxide in glycerine. The addition of water decomposes it, forming boric acid. In therapeutic measures, it is found most convenient to use a fifty per cent. solution in glycerine, which is of the consistency of honey.

"Experience confirms it as an antiseptic astringent of great value in almost all catarrhal affections. It is a good surgical dressing after the acute inflammatory stage, and its application has been followed by good results in relaxed conditions of the throat, post-nasal catarrhs, and gleety discharges; its addition to poultices keeps them sweet and clean in hot weather, even over long periods. It is of the utmost value in gynecology, and supplies a long-felt want. In such cases it should always be applied upon a cotton or jute tampon and allowed to remain from twelve to twenty-four hours. I have seen them on several occasions remain in the vagina, by accident, nine days or longer, and when removed they were not foul. Lacerated cervices, erosions, subinflammatory uterine disease, and leucorrhœa, all show great improvement from its use. I have frequently seen a single tampon remove a long-standing leucorrhœa. For these applications we have also used solutions containing iodine (gr. xx–xxx to ℥j) and thymol (℈j to ℥j). In pruritus of the vulva or anus, it is the treatment we have used. A friend reports to me the case of a patient of his, whose suffering from genital pruritus was so great as to lead her friends to be anxious for her mental state, in which, after all other forms of treatment had failed, an application of boroglyceride brought instantaneous relief. The addition of quiniæ sulph. (℈j) to ung. boroglyceridi (℥j) is very efficacious in pruritus ani. We have several times given it internally, but have never seen any results which we thought were better than from the use of boracic acid."

1316 Walnut Street, Philadelphia.

[1] I may here state that if the pus makes its appearance the second or third day after birth in large quantity, the case will prove refractory, and is not responsive to mild remedies.

A CONTRIBUTION TO THE THERAPEUTICS OF KAIRIN.

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As this drug has but recently made its appearance in the field of clinical medicine, and is comparatively unknown to most practitioners, a brief review of its history will not be inappropriate.

It is well known to chemists that the alkaloid *quinine* contains a very large proportion of hydrogen, and recent investigations have shown that it exists in the quinine molecule in combination with *quinoline*. Taking advantage of this knowledge, Drs. Fischer and König,[1] of Munich, instituted a series of experiments in the hope of finding a body possessed of an action similiar to quinia by a synthesis of its elements. By a variety of combinations (beginning with hydrated quinoline), the chemists have succeeded in producing "kairin," of which the *hydrochloride* ($C_{10}H_{13}$,NO,HCl) is the preparation offered for use. It occurs in the form of a crystalline powder of a bright, grayish-yellow color. It is readily soluble in water, and has a bitter-saline, somewhat aromatic taste, which, however, is very transient.

As far as can be ascertained, kairin was first used clinically by Dr. Wilhelm Fischer,[2] of Berlin. He found that when administered to healthy, robust adults, it exerted no physiological action whatever, and was perfectly indifferent toward the temperature. It caused no untoward symptoms, such as headache, humming in the ears, etc. According to Girat's experiments, the toxic dose ranges between one and two grains to the pound of the weight of the animal. The symptoms of an over-dose are those of heart-failure, viz., weak pulse, cold extremities, cyanosis, etc.

Soon after the discovery of the drug, Dr. Filehne,[3] of Erlangen, made a series of careful experiments with it in various diseases marked by high temperature, including pneumonia, phthisis, septicæmia, typhoid fever, and acute articular rheumatism. As a result of his observations, he found it to be a safe and efficient antipyretic, quick in its action, and not unpleasant in its effects. He recommends its use tentatively, in commencing doses of about seven and a half grains per hour, to adults, for four hours, or until the temperature has fallen to 100° F.; the dose is then lowered to three or four grains, to be again increased when the temperature rises. He states that by carefully experimenting during the first day, the proper dose for each individual may be ascertained, which may be adhered to in the subsequent treatment.

Filehne's recommendations have been carried out by subsequent observers, but in some cases with different results. Seifert,[4] for example, reports two cases of severe pneumonia in which he gave doses of eleven grains on alternate hours. No change in the pulse or temperature was observed, and vomiting ensued in both cases. In another case, the temperature was lowered, but the patient became collapsed and died.

Riegel's[5] results were likewise unfortunate in the treatment of pneumonia with kairin. He found that, although in some cases it lowered the temperature nearly to the normal standard, it rose again almost immediately after the discontinuance of the drug. Besides, no improvement in the subjective symptoms, as described by Filehne, was noticed, and there was frequent tendency to great depression, amounting almost to collapse. He concludes, therefore, that kairin is dangerous in pneumonia, on account of its depressing action, and discountenances its use in asthenic forms of the disease.

On the other hand, we have numerous reports of the beneficent action of the drug. Dr. Sassetzki[6] employed it with good results in a case of typhus fever. It lowered the temperature markedly, but caused no sweating. Dr. Knipping,[7] of Neuwied, gave it with marked success in a case of puerperal pyrexia, in which quinia had failed, and where cold was precluded by the weakness of the patient. He noticed profuse diaphoresis, though there was very little decline in the pulse-rate. It was continued for a week with good results, and the patient recovered. Dr. Paul Guttmann[8] employed kairin in a large number of cases, including a great variety of diseases. His results were largely confirmatory of Filehne's, as were also those of Dr. H. A. Janssens,[9] of Holland.

So far, kairin has received very little notice at the hands of investigators in the United States, although frequent attention has been called to it by the medical press. During the summer of 1883 it was used in six cases of typhoid fever by Dr. George B. Shattuck,[10] of Boston. His results were in the main corroboratory of Filehne's, Knippings's, and Sassetzki's. In his opinion, kairin as an antipyretic may be considered as very efficient, prompt, and reasonably safe in its action, though he is fully sensible of the transitory character of its effects.

Dr. F. W. Draper[11] gave it in two cases of typhoid fever in the Boston City Hospital. He observed the usual antipyretic action of the drug, though little change was manifested in the pulse.

Dr. Thomas A. McBride,[12] of New York, in an interesting communication gives his experience in the use of kairin. He considers it unwise to reduce the temperature below 101° F., as he observed that, when it fell to a lower point, it was more likely to rise rapidly, and, if it did not, signs of collapse would appear (cold extremities, cyanosis, weak heart, etc.). As to the rigors which have been said to be induced by kairin, he considers them nothing more than the *chilly sensations* which usually accompany or succeed rapid exacerbations of temperature. On the

1 Vide article by W. Filehne, Berl. klin. Woch., Nov. 6, 1882.
2 Berl. klin. Woch. und Pharm. Zeit., 1882.
3 Berl. klin. Woch., April 10, 1883.
4 Centralblatt f. d. gesammte Therapie, June, 1883.
5 Algemeine Med. Cent. Zeit., July 28, 1883.
6 St. Petersburg. med. Woch., September 1, 1883.
7 Berl. klin. Woch., September 10, 1883.
8 Ibid., July 30, 1883.
9 Ibid., November 12, 1883.
10 Boston Medical and Surgical Journal, November 1, 1883.
11 Ibid., p. 417.
12 Medical Record, December 15, 1883.

whole, he regards kairin as a "safe and valuable antipyretic."

Though much has been said about the antipyretic action of this drug, no investigations have been made, so far as I can ascertain, of its action as an *antiperiodic*. Following is the history of a case of intermittent fever treated by the writer with kairin.

David C., æt. 5, an inmate of St. Stephen's Home for Children, was first seen about 3 P.M., November 5, 1883. The Sisters of Charity in the institution informed me that the patient had been suffering with severe chills, followed by high fever, on alternate days, for more than two weeks past. Quinia had been given during the first few days, but apparently without effect, and it had been relinquished, none having been given for a week. When seen at this visit the patient was found in the hot stage of a paroxysm of the fever. The temperature was 105½° F., pulse 138, respirations 39 and very superficial. The face was flushed, and there was extreme restlessness.

Patient was seen three hours later, when the "sweating stage" had become established. The surface was bedewed with a profuse perspiration, and the patient was sleeping calmly. The thermometer registered 101½°, and the pulse had fallen twenty-five beats a minute. Physical examination disclosed nothing save the fact that there was considerable emaciation.. It was evidently a typical case of simple intermittent fever of the *tertian* type. Ordered kairin in three-grain doses to be given every two hours, beginning at 7 o'clock the next morning.

November 6, 3.30 P.M.—Has taken four three-grain doses of kairin; seems to be a little dazed and stupefied and disinclined to talk; hands and feet are not quite as warm as natural, but the pulse is strong and regular; skin moist, and urine abundant—presenting the characteristic greenish appearance noticed by Fischer, Filehne, and others; temperature 98°, pulse 110, respirations 22; ordered kairin discontinued for to-day, but to be given in same doses and at same intervals to-morrow, with an occasional tablespoonful of brandy and milk.

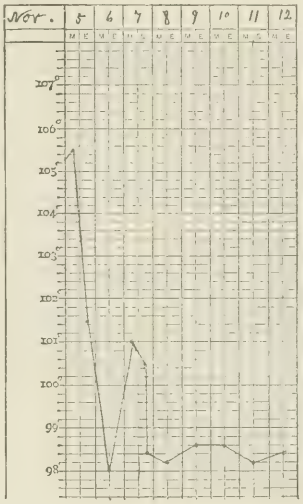
7th, 3.40 P.M.—(Hour for paroxysm). Has had but three three-grain doses of kairin, as the nurse neglected to begin early enough to give four, as ordered. The nurse informs me that the patient has had a slight rigor, which came on about an hour later than usual; the temperature is 101° F., pulse 120, respirations 24. A few herpetic vesicles are noticed about the lips; is bright and communicative, skin moist, and urine still greenish. A dose of kairin (three grains) was given, and the temperature, taken an hour later, was found to have fallen half a degree; defervescence continued until 8 P.M., when the temperature had reached the normal standard.

8th, 3.30 P.M.—Has had five three-grain doses of kairin; pulse, temperature, and respiration are normal; seems to be in good condition; moderate stimulation has been continued; there are no signs of heart-failure; the perspiration is profuse, and the urine is still deeply tinged.

9th, 3 P.M.—Has had five three-grain doses of kairin; temperature 98¾° F., pulse 90, respirations 21; has had no signs of rigor or fever to day; has no headache, and is very cheerful; appetite is returning.

10th.—No change since yesterday; is up and playing about the room, and seems as well as usual.

11th and 12th.—There has been no return of the fever, as shown by the temperature chart; kairin has been continued in diminished doses.



Intermittent fever—tertian type.

January 14, 1884.—There has been no recurrence of the paroxysm of chill and fever, and the patient enjoys his usual health.

In a case of typhoid fever in a boy, æt. 7, kairin was given with good results. The disease had progressed for several days, and during the evening exacerbation the temperature had attained a maximum of 106° before kairin was administered. On the day following this high temperature, eighteen grains of the drug were given (it was given in three-grain doses every two hours at first, but latterly the interval was diminished to one hour). It had the result of keeping the temperature down to 102½° at the height of the evening exacerbation; nor did it rise above this during the remainder of the fever, except on one day, when only two doses of kairin were given, it rose to 104.° It was found necessary to keep the patient constantly under the influence of the drug, as the temperature showed a tendency to rise within a few hours after the last

dose was given. It was found that by carefully observing the case, and employing moderate stimulation, the doses could be repeated almost *ad libitum*, without causing signs of collapse.[1] Kairin was continued for five consecutive days, and the case progressed to a favorable termination.

In a case of acute tuberculosis, with a temperature of 105°, kairin was given with the effect of lowering the temperature to 101°. It seemed to contribute to the comfort of the patient, though apparently without prolonging life, as the case terminated fatally on the eighth day of its administration.

In reviewing the investigations so far made with kairin, we are led to the following conclusions:

1. It is a decided febrifuge, rapid, though somewhat fugacious, in its action.

2. It diminishes the frequency of the heart's action to some extent, though the pulse-rate does not fall *pari passu* with the temperature.

3. The symptoms of collapse—cyanosis, cold extremities, etc.—may be entirely or in a large degree avoided, by close attention and the proper use of stimulants.

4. It is a tolerably constant diaphoretic.

5. Its action in intermittents, though not fully tested, warrants the belief that it possesses valuable antiperiodic properties, and as such should be carefully investigated.

6. Though kairin itself may not be found to possess all the properties of the alkaloid quinia, enough has been learned of its action to justify the hope that a perfect substitute may yet be found, and to inspire us with renewed confidence in the resources of organic chemistry.

A CASE OF COMPLETE TRANSPOSITION OF THE VISCERA, WITH NOTES.[2]

BY JOSEPH EICHBERG, M.D.,

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IN the month of May of the year 1882 I was requested by Dr. W. H. Taylor to see with him a case of considerable interest, of which he promises to give the clinical features at an early day.

The subject was a young child, about two and a half years old, who presented at the umbilical depression a small opening, through which there passed considerable quantities of a light-yellow fluid. The opening was surrounded by indurated tissue for about one inch in every direction, easily admitted the probe for an inch and a half, and seemed to communicate with a large cavity situated immediately below the abdominal wall. The point of interest to the Doctor, at that time, was to ascertain definitely, if possible, whether the opening was an intestinal fistula, or communicated with any other viscus.

Having obtained a small quantity of the fluid above mentioned, I found, on microscopical examination, that it was composed almost entirely of finely divided fat (the child was subsisting at that time almost exclusively on milk, and received as medicine brandy and cod-liver oil), contained a few starch granules (from some potatoes taken surreptitiously the day before), and a considerable quantity of the large, nucleated columnar epithelium characteristic of the mucous membrane of the intestine. The result of this investigation left no doubt as to the nature of the opening, and a diagnosis of fecal fistula was made. There were circumstances, to be narrated in the clinical history, which rendered a prognosis, sufficiently grave from the nature of this single lesion, extremely unfavorable, and little hope was held out that the child could recover.

Some six or seven weeks after my first visit, I was notified that the child had died, after becoming more and more emaciated, and that the friends had consented to a post-mortem examination. I was obliged to make this at night, by a very indifferent candle-light, so that the results were not perfectly satisfactory. In proceeding in the usual way by making a longitudinal incision through the abdominal wall, I found the intestines matted together and firmly adherent to the parietes about a point corresponding with the artificial opening above mentioned. Careful dissection showed that the opening passed through the wall of the abdomen into an artificial cavity bounded on all sides by the peritoneal coat of adherent coils of the intestine, so that a circumscribed space of about an inch and a half in diameter was formed; this cavity was filled with a fluid of the same nature as that we had obtained during the life of the child. The posterior wall of the cavity, made up, like other parts, of intestinal loops, showed at one point an opening communicating, as we found by tracing down the intestine, with the central portion of the ilium, through which the intestinal contents passed, firstly, into the cavity, and then, through the fistula, to appear externally.

The coils of intestine had so completely filled the field, that I was not a little surprised, on drawing them down to continue my explorations, to find the larger part of the liver in the left hypochondrium, from which the stomach was entirely absent. The further course of the examination soon showed that I had to do with a case of complete transposition of the viscera, all of the internal organs being displaced so as to occupy similar positions on the opposite side of the body. The spleen was found on the right side, the stomach on the right side, the aorta to the right of the vertebral column, the sigmoid flexure on the right, the cæcum and ascending colon on the left side. Owing to the chronic peritonitis which had matted all parts together, to the poor light, and the youth of the child, it was not possible for me to trace the spermatic veins, to note the relations of the kidneys. The lungs and heart had undergone the same change of position; the right lung, as indicated by the presence of its three lobes, and the direction of its bronchus with relation to the trachea, being in the left half of the thorax, the left lung occupying the right side, in which, too, the heart was situated.

As to pathological lesions, there were found numer-

[1] The perspiration was often profuse.

[2] Read before the Cincinnati Medical Society, Jan. 29, 1884.

ous tubercular ulcers of the intestine, each ulcer being surrounded by a secondary crop of tubercles deposited in the subserous lymphatics, several ulcerations extending down to the peritoneal layer, and involving the large as well as the small intestine. The mesenteric glands were very much enlarged and caseous, two of them were almost entirely broken down, so as to constitute small abscesses. The lungs showed at the apex a few patches of lobular pneumonia with atelectasis of adjacent lobules; but no signs of tubercle were discovered here. It is probable that, in the course of the chronic tubercular process, adhesions were formed between several loops of intestine and the anterior abdominal wall; that the inflammatory products thrown out by the inflamed peritoneum, on the one hand, and about the gradually advancing ulceration, on the other, had finally undergone caseation and softening, and had perforated the anterior wall of the abdomen, so that when the tubercular ulcer finally perforated, it found in front of it a cavity, into which its contents were readily emptied, and from which they were constantly discharged. It was interesting to note the comparative absence of lesions in the lungs, the changes above mentioned as occurring there, being of recent date, and the atelectasis easily accounted for by the enfeebled condition of the child, rendering obstruction of the smaller bronchioles likely to occur from deficient expiration. The probable origin of the tubercular infection was to be sought in the enlarged and degenerated mesenteric glands.

I do not know whether the anatomical anomaly was recognized during life, but it is sufficiently important to merit a little attention. I have before met with one case of complete transposition in a living subject, the case being one that is annually presented to members of a class in physical examination at Vienna; and I am informed that Dr. Illowy of this city has a similar case under observation. I should have taken great pleasure in presenting this individual, but I learn that he is temporarily absent from the city. Dr. Illowy, however, assures me that, at an early date, opportunity will be given of showing the case.

Guttmann,[1] in demonstrating a case of transposition of the viscera before the Berlin Medical Society, says that, from more than one hundred cases collected by him, the anomaly is found more frequently in men than in women, the proportion being as two and a half to one; in ninety per cent. it is found in all the organs of the thorax and abdomen; in ten per cent. in the abdomen alone. Simultaneous transposition of the viscera of thorax and abdomen is complete in seventy-five per cent. of all cases. The duration of life is not influenced by this malposition, as more than half of the reported cases reached ages varying from twenty to eighty-four years.

Gruber comments upon seventy-nine cases studied by himself. Of these, seventy-one were cases of general transposition of all thoracic and abdominal viscera; in eight only abdominal. Seventy-eight occurred in human subjects, and one in the horse (Von Baer mentions a case occurring in a chicken). Forty-nine subjects were men, nineteen women. In eleven the sex was not mentioned. In two cases the subjects were fœtuses, twenty were children up to nine years old, two between fifteen and seventeen, and fifty-five adults between twenty and eighty-four years. The same average age was attained by both sexes. The spleen was wanting in three cases, rudimentary in one, divided into two in one, into three in one, and accompanied by accessory spleens in three cases. There was an abnormal position of the kidneys in eight cases; in one case there existed only one kidney; and in one case the spermatic vessels were not transposed.

In regard to the diagnosis of the position of single organs, we may, by percussion, determine the position of the heart, liver, spleen, stomach; and in some cases of the rectum on the right side, and of the ascending colon on the left. We may also determine the position of the œsophagus on the right of the trachea. Further, the slight lateral deviation of the spinal column, which is normally directed to the right (owing, probably, to the direction of the aorta, and not to the individual being right-handed), gives place to a deviation to the left side; though of thirteen reported cases eleven were right-handed. We may also suspect the transposition of the lungs if pectoral fremitus and the bronchial expiratory murmur are heard more clearly on the left than on the right side. Lloyd[1] mentions in addition that, in a case under his observation, the right testicle was lower than the left.

Von Puech[2] relates a case, reported by a physician of Nimes two hundred years ago, which is probably one of the earliest examples noted. In this case—very like our own—the autopsy was made on a child eighteen months old, weakly from its birth, which died from caseation of the mesenteric glands.

That these cases are not only interesting as anatomical anomalies, but may seriously endanger success in operative measures, is shown by the history or a case reported by Baker[3] of a patient suffering from cancerous stricture of the rectum, upon whom the operation of colotomy was performed in the usual way on the left side, without affording any relief. Death ensued on the following day, and the sigmoid flexure was discovered on the right side, the ascending colon being on the left.

Referring again to the etiology of the displacement, we may mention the theory of Von Baer, who attributes it to a deviation of the umbilical vesicle, which precedes in the order of development both the heart and liver. This normally occupies the median line of the body, inclining later a little to the right. Should this deviation, however, incline the vesicle to the left side, transposition of the viscera follows.

Rindfleisch accepts the displacement of the heart as the prime factor in the general transposition, and

[1] Berlin. klin. Woch., 1876.

[1] London Lancet, 1880, vol. i. p. 527.
[2] Gazette Obstetricale, 1878.
[3] British Medical Journal, 1880.

offers, as an explanation of its occurrence, the following theory:

Every column of liquid which flows through an elastic tube under strong pressure experiences a spiral torsion, and the same physical law may be held to apply to the blood-column, which, like other fluids under similar circumstances, communicates its spiral motion to the vessel containing it. The primitive heart-sac, therefore, acts like a twisted cylinder, and, under normal circumstances, the direction of the spiral turn is from left to right, so that the lower extremity of the spire, subsequently to become the apex of the heart, falls to the left. Should, however, the spiral turn assume the other direction, so that the apex falls to the right, the result will be a complete inversion of the non-symmetrical viscera, which are not formed until a subsequent period, and thus splanchnic inversion must follow.

This explanation, purely theoretical as it is, still leaves us in the dark as to the cause of the unnatural deviation of the spiral to the right side, nor is it likely that the solution will soon be forthcoming. Leaving aside the question of primary etiology, it certainly is more in accordance with the general harmony of nature to assume that one of the earliest developed organs should exercise such an influence over the remainder, as to regulate their position by its own, than that the anomaly should affect each of the misplaced organs individually. We know that the circulatory system is one of the first to show itself in the newly formed being; that in the chick, the contractions of the heart are apparent as early as the thirtieth hour of fœtal life (Kölliker), and it is very reasonable to suppose that an anomaly of position, affecting the heart in the early stages of its development, should not remain without influence on the other viscera, whose growth and development are largely dependent upon that very circulation, of which the heart constitutes so important a part.

A NEW MODE OF OPERATING FOR LACERATED PERINEUM.

By A. H. GOELET, M.D.,
of New York.

It may not be out of place to preface the present article with a suggestion which will aid in the prevention of this accident. Much has been said and written on both the prevention and repair of this injury; but in looking over the literature of the subject, the claim of novelty seems justified in both instances.

When the thighs are flexed on the abdomen, as in the usual obstetric position, greater strain is put upon the perineum as the surrounding integument is put upon the stretch; and, conversely, when the thighs are extended the surrounding integument is relaxed, and with it the perineum; which can be demonstrated by the seat of one's breeches in assuming these positions. If this position be maintained from the moment the head impinges forcibly against the perineum until the whole of the fœtus is expelled, aided by well-directed traction backwards, by means of two fingers hooked in the posterior commissure of the vulva, in the intervals between the pains before the head is against the perineum, the great majority of lacerations which now occur will be prevented. I insist upon this position being maintained during the expulsion of the body of the child, because I believe as many lacerations are produced by the shoulders and hips as by the head, if not more. The experienced obstetrician will not need to be cautioned against a too rapid delivery of the body. I do not mean to say that the limbs should be completely straightened out, but extended, and with the knees only slightly flexed.

Should the accident occur, the immediate operation is strongly advocated. The surface is already denuded, there is little pain produced by the introduction of the sutures at this time, and usually no anæsthetic is required. If the sutures be applied in the way to be described, union will take place more readily, and there is little or no risk of septicæmia; there is better chance of restoring the tone and elasticity of the parts and the functions of the sphincter; and, lastly, the operation will be allowed now, but may be refused afterwards, to the detriment of the patient's future health.

In operating immediately after delivery, place the patient in a good light, on her back, with the knees well separated, and, using the silk-worm gut or Lister's carbolized catgut ligature for sutures, with a small, short needle commence introducing them on the vaginal surface, at the termination of the vaginal rent, tying each suture in the vagina as it is introduced, and in this way stitch the torn vaginal edges together up to the point where this line meets the perineal edge of the wound. Then, with interrupted sutures of the same kind or of silver wire, commencing at the bottom of the perineal surface of the wound (making the sutures superficial only) stitch these surfaces together, carefully coaptating the edges, and closing the wound completely at the top, where the two sets of sutures meet. I prefer the silk-worm gut for the internal sutures because they may be left in for an indefinite period, and do not irritate or become absorbed.

In the secondary operation, I agree with Dr. Emmet that the denudation is generally carried too far out, and the attempt is made to make more of a perineum than originally existed. Externally, the denudation should not be carried further than the line of cicatrix of the old perineum. Denude the outer border first, commencing on the left side of the vulva (right of operator), at the upper point of this line; denude a strip around to the same point on the opposite side, taking care to follow the line of cicatrix and not go too far out. As a guide to the limitation of denudation internally (as suggested by Dr. Emmet), hook up with the tenaculum the apex or crest of the rectocele at such a point that, when pulled forwards to the upper angles of the perineal cicatrix, puts the posterior wall of the vagina gently on the stretch. Then remove a strip of mucous membrane from the upper point of the external boundary line on the left side of the vulva to the point on the crest of the rectocele already deter-

mined upon, and from there to the same point on the right of the vulva. The island of mucous membrane surrounded by these lines is then removed.

The next step is the introduction of the sutures, and this is done in the same way as in the primary operation. The vaginal edges of the denuded surface are stitched together with interrupted superficial sutures of silk-worm gut tied in the vagina, taking care to coaptate the edges carefully. The feel to the finger as it is passed in, after these sutures are all tied, is that of the natural slope of the posterior vaginal wall.

There is now left the outer or perineal border to be united, and, after the wound has been thoroughly cleansed, this is done by interrupted superficial sutures from below upwards, using the silver wire or silk-worm gut, and inserting them near enough together to coaptate the edges thoroughly. Eight or ten vaginal sutures are usually required, and six or eight perineal.

The advantages of this over the old method of introducing the sutures are evident. The more complete coaptation of the edges of both vaginal and perineal surfaces possible by this method insures more prompt and perfect union, and prevents the urine or any discharge from the uterus from coming in contact with the raw surfaces, and the catheter need not be used, which is a great desideratum. The rectocele is turned in and covered up by bringing the vaginal edges together in this way, and the posterior vaginal wall is drawn upwards, narrowing the vaginal orifice to its original capacity. In the old method of introducing deep sutures of silver wire, the internal or vaginal edges are but imperfectly coaptated, and as the sutures are tightened the posterior vaginal wall is pulled downwards. This produces a puckering and thinning of the prospective perineum, and by compressing the bloodvessels interferes with the circulation and nutrition of the parts, and tends to prevent good union.

Since March, 1883, when I first operated in this way, I have had perfectly satisfactory results in every case.

The perineal sutures may be removed before the patient leaves the bed, but the vaginal sutures are left in for two or three weeks until the union is sufficiently strong to admit of the necessary amount of dilatation of the vaginal orifice to remove them.

The carbolized catgut sutures, if they do not soften too quickly, may answer for the vagina, and would not require to be removed.

243 West Fifty-fourth Street.

HOSPITAL NOTES.

ORANGE MEMORIAL HOSPITAL, ORANGE, N. J.

(Service of Dr. William Pierson.)

BRONCHOCELE; EXCISION AND RECOVERY.

Reported by James Y. Simpson, M.D., House Surgeon.

Mary F., æt. 20, native of Ireland. Her general health has always been good. Patient has had a swelling at the position of the thyroid gland for twelve years. It has remained small and given her no trouble until a year ago, when it gradually increased in size. During the last seven weeks it has grown very rapidly, and this growth has been accompanied by gradually increasing dyspnœa and dysphagia. The dyspnœa was most marked when she was lying down. She has always had a slight amount of pain in the tumor, but this pain has decidedly increased lately. She has been taking tincture of iodine internally, and having it applied to the skin over the tumor. None of her family have had tumors. Her mother died of consumption and her father of "dropsy."

Condition on Admission.—Admitted October 10, 1883. Patient is well nourished. The thyroid gland is very much enlarged, extending from just below the inferior maxilla to the upper border of the sternum, and laterally beyond the posterior borders of the sterno-mastoid muscles. Patient complains of daily headache, the pain being sharp and throbbing in the frontal region and at the vertex. She has tinnitus aurium, and sleeps very poorly, being often awakened by a smothering feeling. The tumor is the seat of a throbbing pain, and the limbs and joints are often affected in the same way. Patient is also troubled with a cough of five weeks' standing, which is worse at night. While coughing, she expectorates mucus freely, and before her admission to the hospital the sputa have at times been streaked with blood. Palpitation of the heart is marked. Her appetite is poor, and she often has nausea, vomiting, and gastralgia. Her bowels have moved but once in the last month, and this movement occurred two weeks ago. Her heart, lungs, and urine were carefully examined, but no trouble found with them.

Treatment.—Compound licorice powder was ordered to keep the bowels open, and a nutritious diet was given her.

October 12.—Her urine has to be drawn with a catheter. Appetite poor, but she sleeps well.

19th.—Her headache is very severe. She sleeps very little because of dyspnœa. The pain in her neck is quite severe. Her bowels have moved about every other day.

23d.—Symptoms remain about the same, but if any change has occurred, it is for the worse.

25th.—The patient is very anxious to be operated on, notwithstanding she has been told she may die on the table. A consultation was held by the Attending Staff, to decide if an operation was advisable. All the dangers connected with or liable to follow the operation, namely, hemorrhage during the operation, wounding of the pneumogastric or inferior laryngeal nerves, œdema of the glottis, septicæmia, degeneration of the tracheal structures, mental disturbances, and goitrous cachexia, were fully discussed.

It was decided that, in view of increasing headache, dysphagia, dyspnœa, pain—all evidences of injurious pressure on the bloodvessels, nerves, and trachea—it was best to perform thyroidectomy. All of the Staff were of the same opinion. All of the dangers were accurately detailed to the patient, and she still desired the removal of the tumor.

At 11 A.M. the patient was placed upon her back, and the mixture of Billroth—which we always use at this hospital—was administered until complete anæsthesia was produced. This anæsthetic mixture is composed of

ether three parts, chloroform and alcohol each one part.

We have the records of twenty-seven cases in which this was administered, in only two of which vomiting occurred. In all of these cases the patients became anæsthetized more rapidly and remained in a better condition while under its influence than we have ever seen them do with ether.

The operation was performed by Dr. William Pierson, assisted by Drs. Holmes, Chandler, Buttner, and Harvey, of the Attending Staff, and in the presence of a large number of other physicians.

The right anterior jugular vein was ligated with catgut, by passing an aneurism-needle beneath it. This vein was quite prominent as it passed over the tumor, and it was thought best to tie it before making the incisions. An incision was then made in the median line, commencing below the chin and terminating at the upper border of the sternum. Transverse incisions were then made on the sides, so as to intersect the longitudinal incision at right angles. This gave a large, crucial incision, which exposed the tumor. The superficial and deep fasciæ were then divided on a director, the bleeding vessels being secured by artery forceps, which were left in place, excepting some of the veins, which were tied in two places, and then divided between the ligatures. The capsule of the tumor, which was plainly seen, was separated from the surrounding tissues by the fingers. Next, the tumor was lifted from its bed, and the superior and inferior thyroid arteries tied separately, by passing an aneurism-needle beneath them. The capsule of the tumor was then opened, and the tumor enucleated by means of the fingers and scissors. The pedicle of the tumor was next tied in two parts by a double ligature passed through it. The tumor being then excised, the bleeding vessels were tied with catgut, excepting a few which were held by black silk. All of the ligatures—with the exception of those on the thyroid arteries and the pedicle, which were brought out at the extremities of the transverse incision, to assist drainage—were cut short and left in the wound.

The operation was done under strict antiseptic precautions—including the spray—and antiseptic dressings were applied to the wound. The hemorrhage during the operation was not very profuse. The patient did not rally very well from the operation until whiskey was given hypodermatically.

26th.—Morning temperature 99°, pulse 110. Patient is compelled to take nourishment by the rectum, being unable to retain it in her stomach. She coughs a great deal, but expectorates very little. Her urine is drawn with a catheter. Evening temperature 102.4°, pulse 188.

31st.—She has coughed and expectorated freely until to-day. Complains of very little pain, and sleeps and eats well. Dressings removed for the first time. The wound is discharging healthy pus from the drainage openings, and the greater portion of the flaps has healed by primary union. Temperature 98.5°, pulse 78. Can pass her urine.

November 3.—All the sutures but one were removed to-day. The wound is healing rapidly, but the discharge is still free.

7th.—Pulse and temperature normal. Appetite and sleep good. Has no cough. She has a slight amount of pain in the neck. At one angle the wound tends to gape, but is held together with salicylated isinglass-plaster. Discharge is still free.

14th.—Wound is healing rapidly. Discharge is much less.

27th.—Discharge very small in quantity.

December 1.—Allowed to go home. The wound has entirely healed, excepting at two points, where the granulations are very healthy. Patient's appetite is very good, and she sleeps well. Her general condition is excellent. Her cough has about disappeared, and she is feeling well in every respect, and has none of the old symptoms which were prominent before the removal of the tumor.

Report of Examination of Tumor, made by J. W. STICKLER, M.D. The tumor weighed one pound and a quarter. Its shape corresponded with that of a normal thyroid gland. The exterior was quite smooth, save at certain points where there was considerable connective tissue, which had bound the tumor to the skin. Its color was a very dark red. An incision into the interior of the mass on each side of the isthmus revealed numerous small round bodies which were semi-translucent and looked like globules of gelatine collected together. They gave to the surface a shiny and somewhat yellowish appearance. When compression was made, blood oozed from the cut vessels, and flowed quite freely.

Microscopic Examination.—There were some large alveoli having quite dense connective-tissue walls. Many of the alveoli were separated by irregularly placed cells, some of which were granular and deeply colored, while others were in appearance like gelatine. There were also numerous cells within the alveoli which had undergone colloid degeneration, while between them and in the interalveolar spaces there was considerable colloid material, which had a faintly striated appearance. At certain points there were large aggregations of altered cells without any definite arrangement. There were only a few bands of connective tissue, and they were most numerous near the capsule of the tumor. The capsule was not very thick, but was quite dense in structure. Arteries which were tortuous in their course were seen traversing the substance of the tumor.

MEDICAL PROGRESS.

SINUSES TREATED BY SPONGE-GRAFTING.—MR. W. WINSLOW HALL reports a case in which he treated four sinuses in the right forearm by sponge-grafting, other treatment having failed. A strip of fine sponge, one inch and a half by a quarter of an inch, had been soaked in dilute nitro-muriatic acid for twenty-four hours, then washed in water, soaked in carbolic solution for twenty-four hours, and washed a second time in water. This was tied to a piece of thin catgut threaded on a long needle. A director was thrust to the bottom of the sinus; the point of the needle was passed down to the end of the director, and was then brought through the skin. The director was withdrawn, and by pulling on the needle and catgut the sponge-strip was made to fill the sinus from top to bottom. The catgut thread was cut off at the level of the skin, and the wound was dressed with carbolic oil. In three months the arm was entirely well.—*Edinburgh Med. Journal*, March, 1884.

The Diagnostic Value of a Systolic Murmur after Partial Division of an Artery.—In the *St. Petersburg. Med. Wochenschrift*, January 7–19, 1884, Prof. Edward Van Wahl has an interesting paper on this subject. He was led to the investigation of this subject from the satisfactory result of a case of gunshot wound of the thigh, in which the revelation by the stethoscope of a systolic murmur convinced him that the artery had been wounded, and induced him to proceed to tie a ligature on both the central and peripheral ends, as a means of preventing the usual development of such cases. A course of physical investigations by a student of Prof. Wahl, established the fact that when water was conducted through a rubber tube under a pressure of one hundred and ten millimetres of mercury, whether the pressure was constant or subject to pulsations, it always developed a blowing sound, recognizable by the stethoscope, wherever there existed a defect in the tube or a thin spot in its wall. Observation extended to animals whose arteries had been intentionally wounded, gave the same blowing systolic sound when the blood passed out of the opening in the vessel into the surrounding tissue. When the artery, however, was plugged by a thrombus, the sound was of course absent. The importance of this fact can scarcely be overestimated when we reflect how often it happens that the most important symptom of such arterial wounds, bleeding, stops for a while, only to develop later into blood-infiltration, with its consequent associate evils. If, however, the surgeon can satisfy himself that the artery has been wounded, a definite course of action would be immediately suggested. G. Fischer also observed the same phenomenon during the Franco-Prussian war in 1872. In these cases, however, the murmur was not, as it appears, observed until several days after the accident, with a view of obtaining information relative to a primary operation. He supplements his theoretical and historical consideration of the question by three cases: The first published by him in 1881; wound of soft parts, lower third of right thigh, arterial bleeding. One hour after the accident, stethoscope revealed loud systolic murmur, which was recognizable both upwards and downwards in the course of the artery. Ligature of both ends of the artery.

Second case, wound in right upper arm; arterial bleeding. Compression and cold application stopped the bleeding, but on account of pain and swelling he applied for assistance to Wahl's clinic, eight days after the accident. The systolic murmur was distinctly heard in the course of the artery, and the radial pulse was distinctly felt. The diagnosis of a partial division of the artery was made, associated with a commencing hæmatoma, but as no blood had shown itself for eight days, it was thought desirable to allow the wound, which was in a condition of suppuration, to heal before ligating the artery. Bleeding, however, without any apparent cause, set in, and the ligature of the two ends was effected on the following day.

Third case, shot in the left side beneath the clavicle. Profuse bleeding occurred, but stopped, without interference, in half an hour. One hour after the accident he was taken to Wahl's clinic. An extensive infiltration of blood existed in the region of the wound, which was exactly in the course of the subclavian artery. The radial, brachial, and axillary arteries were imperceptible. Severe pain in the fingers and arm. No cough, no vomiting of blood. There was no murmur to be heard with the stethoscope along the course of the artery. The diagnosis was complete division of the subclavian artery. The artery was exposed, and before the clots were removed, the ligatures were placed in situ. After securing the ligatures, the artery was found to have been severed, with the exception of a small piece of tissue about two millimetres wide. The mistakes in diagnosis in this case of a complete division of the artery were due to the absolute occlusion of the artery by means of a blood-clot. This occlusion, however, was only temporary, and had the operation not been undertaken at the time, it would have unquestionably been necessitated later, and under less favorable circumstances. These cases will not fail to show the value of the stethoscope in cases of wounds along the track of the large arteries.—*Weekly Medical Review*, March 1, 1884.

Chloroform Astigmatism.—M. Dubois has made an interesting communication to the Société de Biologie on the action of chloroform on the nutritive media of the eyeball and on the mammary gland. On examining the fundus of dogs narcotized with chloroform, he found its characters unusually difficult, and at times impossible, to distinguish. He observed, also, shadows upon it, which seemed to be produced by a particular alteration of the cornea. Irregular astigmatism was present, and was pronounced. By washing the ocular surface, he proved that these appearances did not depend on mucous flakes in front of the cornea. Similar and very marked astigmatism was observed in a man while under chloroform. This abnormality was found to disappear when sensibility returned. Diminution of refraction was particularly noted in one of the dogs. The tension of the globe was in these various cases also lowered. A comparative observation on the mammæ of a bitch appears to throw some light on the ocular phenomena. The breasts, which were turgid with milk at the commencement of anæsthesia, became flaccid and comparatively empty when the animal was fairly comatose. It may be suggested in accordance with these experiments that the peculiarities of refraction above detailed, like the alterations in the breast, are due to relief of tension in the fluid constituents of the organ affected, a condition which may easily occur during chloroform administration if the heart's action continue vigorous, seeing that every vascular channel then undergoes relaxation of its muscular fibre and consequent dilatation, and the escape of its contents is proportionally facilitated.—*Lancet*, February 16, 1884.

Rupture of the Bladder, Dislocation of the Knee, and Compound Fracture of both Lower Limbs.—Mr. Cottenham Farmer reports the case of a boy, æt. 15 years, who was injured in the above-described manner by a railway train on July 4th. On passing a catheter, about two ounces of bloody urine were drawn off, but without relieving his desire. The catheter was thereupon tied in, under the full impression that grave injury, probably rupture, existed. Further examination was then made, chloroform having been given. There was a compound comminuted fracture of the lower third of the right leg, with loss of blood from the wound, and dislocation at the knee-joint. There

was also a compound and much comminuted fracture of the left leg.

The following treatment was at once adopted. Both wounds were covered with dry absorbent wool, and then the legs, to above the knee, were enveloped in Southall's pads. These were strengthened with soaked millboard splints, and the whole was firmly and evenly bandaged from the toes to above the knee-joints. The dislocation was then reduced. The boy was then carried to bed, and the legs placed in Lawrence's cradle-splints, and these were swung by ropes suspended from the ceiling, so as to insure to the limbs the freest possible movement. Opium was administered during the night, and poultices were applied to the abdomen.

On the 5th, the patient complained only of abdominal pain. There was great tenderness over the pubes. The urine passed through the catheter less tinged with blood. Next day the urine was clear; there was still suprapubic pain. On the 14th, the catheter was withdrawn, and he passed urine freely and with little pain. His legs had never given him the least discomfort; but Mr. Farmer, on the 14th instant, cut open the bandages and exposed the limb. He was astonished at its appearance. It looked quite natural; the wound had healed, nor was there even a trace of ecchymosis; the bones appeared firm and free from pain on pressure. The splints were reapplied on the 20th. Owing to a disagreeable smell, he opened and exposed the left leg, finding the following condition. The limb looked in every way healthy, but on its inner aspect, lying thoroughly exposed, and without the slightest signs of inflammatory action, was a large piece of the tibia (over two and a half inches in length). This he seized and lifted out of its bed, leaving a healthy looking wound, which progressed rapidly towards healing.

On August 16th, both legs were put up in plaster-of-Paris, and the patient left for home. He has since resumed his work.—*British Medical Journal*, March 5, 1884.

THE RECTUM ENDING IN THE MEMBRANOUS PORTION OF THE URETHRA.—DR. WILLIAM CRAIG reports the case of a child, the subject of this malformation. Two days after its birth, it having been discovered that the feces were passed through the urethra, an exploratory incision was made in the region of the anal depression, but no bowel was found. The child died about eighteen days after its birth. The autopsy showed the following condition. Externally the penis, testicles, and scrotum were normal in appearance and development. In the middle line of the perineum, instead of an anus, there was a depression or cul-de-sac of sufficient depth to admit the greater part of the distal phalanx of the little finger. The internal organs were exposed by a crucial incision and inspected *in situ*. Above the pelvis they were normal and healthy. The ascending and transverse colon contained some soft, semi-fluid feculent matter, bright yellow in color. The descending colon and the pelvic organs, including the penis, scrotum, and testicles, were removed *en masse*, and preserved for some weeks in chloral. They were afterwards transferred to strong spirits for a few days to harden. A section was made in the middle line of the penis, bladder, and lower part of the rectum. The bladder wall was slightly hypertrophied. There was no communication between the rectum and the bladder, but in front of the prostate gland the rectum entered the membranous portion of the urethra.—*Edinburgh Medical Journal*, March, 1884.

NEW SURGICAL NEEDLE AND THREAD.—DR. JOHN WARD COUSINS describes a very simple innovation, by which the ordinary steel needle is superseded by converting the end of the wire into a needle. The wire is cut into equal lengths, and each piece is separately reduced by drawing, with the exception of an inch or two at one extremity. The end is then converted into a convenient needle by pointing and burnishing.

This little invention offers several advantages in many surgical applications. The needle is always new and clean, and it can be used only for a limited number of sutures. It requires no preparation or threading, and the continuity of the needle and the ligature prevents the delay in introduction which often occurs with the ordinary needle from kinking or twisting at the eye. The point is always perfect, so that the pain of penetration is considerably reduced. Damaged needles are instruments of torture; and, even in these days of antiseptic surgery, I have found them carefully preserved in pocket-cases ready for any emergency. The chief purpose of this little invention is to prevent unnecessary pain, and to provide a needle with a perfect point, which can be used only in the introduction of eight or ten sutures, and then thrown away for ever. It is, moreover, especially adapted for the immediate surgery of the field of battle.

In his hands, nickelled steel-wire has proved an excellent metallic thread for closing skin-wounds; and, in consequence of its peculiar rigidity, it requires only one turn of the ligature to secure the edges in perfect apposition. It admits also of very easy removal, and this is a great advantage, for the "taking out of the thread is often a more painful operation than its introduction." The single turn of the wire should be made on one side of the wound, over the point of penetration; and then, on dividing the wire, close to the skin on the opposite side, the suture can be withdrawn with great facility.

The surgical needle and thread is manufactured by Messrs. Maw, Son & Thompson, in several convenient sizes, from nickelled steel and silver wire. The steel needles are made both straight and curved; the silver needles are tipped with steel, and flexible, so that they can be bent to any shape, and are thus especially adapted to many plastic operations. To protect the point from accidental injury, each needle is supplied with a shield of fine straw.—*British Medical Journal*, March 1, 1884.

RUPTURE OF LIGAMENTUM PATELLÆ, WITH TRANSVERSE FRACTURE OF THE PATELLA.—MR. M. GARDINER, of the Edinburgh Royal Infirmary, reports the case of a man, æt. 33 years, who, while falling, had tried to recover himself by a backward jerk, but had failed to do so. Trying to rise, he found he was not able, and when set on his legs he could neither walk nor stand without assistance.

On examination, a large, tolerably definite swelling was seen over the knee-cap. Touch proved this to be fluid. The movements of the joint were limited, extension being almost abolished. Fluctuation was also to

be felt on each side of the ligamentum patellæ, but the attachment of that structure could not be defined, and the finger felt as if it could pass right in between tibia and femur. Rupture of the ligament was therefore diagnosticated. Owing to the history, attention was next directed to the patella itself, the patient stating that he thought it was broken. On account of the swelling, the patella could scarcely be defined, and owing to the rupture of the ligament its superficial area did not seem increased. Fracture was therefore only suspected, but not absolutely diagnosticated.

The swelling of the knee and surrounding tissues increased, but finally subsided under the treatment adopted, and on the fourth day the joint had so far returned to its normal state as to allow of a thorough and perfect examination. This proved the suspected fracture to be real.

It is difficult at first sight to account for both rupture and fracture, but the probability is that the backward jerk described by patient ruptured the ligamentum, and that the blow on the floor fractured the patella.—*Edinburgh Medical Journal*, March, 1884.

Ovariotomy on a Child Eight Years Old.—Dr. Duchamp reports a case of ovariotomy successfully performed on a child eight years of age. The left ovary and tube were removed. The pedicle was dropped into the abdominal cavity. The child recovered without accident.—*Archives de Tocologie*, January, 1884.

The Virus of Hydrophobia.—M. Pasteur made an interesting communication to the Paris Academy of Sciences, on February 26th, in relation to canine madness. He stated that the disease could be communicated to a dog by inoculation with fragments of marrow or of nerve taken from a mad dog. He also stated that he had rendered twenty dogs proof against the disease by inoculating them with a modified virus.—*British Medical Journal*, March 1, 1884.

Rupture of the Aorta during Labor; Post-Mortem Delivery.—The following case is reported from the Obstetrical Clinic at Helsingfors. A woman, æt. 38 years, pregnant with her third child, after taking a bath, came to the clinic complaining of cold. Her previous health had been good. Vaginal examination showed that the os was completely dilated. The head was in the first position. The uterine contractions were energetic. Ten minutes afterward the patient suddenly had a violent convulsion, went into a state of collapse, and ceased to breathe. It being evident that the woman was dead, the forceps were quickly applied and the child delivered.

An autopsy of the woman showed that the pericardium was distended with a large quantity of blood. The heart was fatty, and strongly contracted. A little above the sigmoid valves, was found a rupture of the aorta, involving the internal and middle coats. The aortic coat was very thin at the seat of rupture, and there was a small spot of atheroma on the ascending portion of the vessel. Heinricius, the reporter, thinks that the rupture was due to the increased blood-pressure caused by the energetic contractions of the uterus and the abdominal walls. He has not been able to find another case in literature of rupture of the aorta during labor.—*Archives de Tocologie*, January, 1884.

Hypodermatic Injections of Calomel in the Treatment of Syphilis.—It being granted, says Dr. Louis Jullien in a recent note on this subject, that the hypodermatic treatment of syphilis is the preferable method, what mercurial preparation shall we use? While Lewin, of Berlin, and the majority of practitioners have expressed a preference for soluble and easily absorbed preparations (the bichloride and the peptonate of mercury), Scarenzio has recommended the use of calomel, in suspension, as a very manageable preparation. The first experiments of Scarenzio were made in 1864. Now, twenty years after, his method has received new attention.

The formula first used by Scarenzio was:

Calomel, ...	gr. iij–ivss.
Glycerine, ...	♏ xxv.

Smirnoff modified this formula to one part, by weight, of calomel, to ten parts, by weight, of glycerine. At each injection about gr. iij of alcohol were thrown into the cellular tissue; but in feeble and anæmic women only about gr. j was used. Scarenzio still further modified this form by using mucilage: calomel, gr. ¼–ij; powdered gum Arabic, gr. ¼; distilled water, ♏ xv. The needle of the syringe used should measure at least one inch long. This is important, as in women especially, and in men sometimes, a small abscess will form at the end of the track made by the needle, and the inflammation extend up through it.

As to the choice of locality for making the injection, the posterior part of the upper arm is preferable, then the back and the back part of the shoulders. Smirnoff says: 1. The substance injected *between* the skin and the muscles is not exposed to pressure. 2. The integument over the buttocks is so thick and firm that, even if the injection causes inflammation, the small quantity of pus formed will not reach the surface, but will be absorbed. After having chosen some point at which to make the injection, the skin is pinched up and the needle passed under it, but not into the muscular structures.

The effect of the injections, in the treatment of the secondary manifestations, is very quickly seen. All who have used the method of Scarenzio, declare that the period of illness for each syphilitic has been greatly diminished by it. The promptness with which the secondary eruption disappears is greater than with any other remedy.

The action of calomel injections is, according to Smirnoff, much more energetic than that of other remedies. Smirnoff also insists upon the value of this method in the manifestations of the tertiary stage. Pirocchi and Porlezza have already cited the case of gummous syphilis of the brain cured by two injections, and several others of periostitis and osteoscopic pains. Calomel injections are well borne by young children. After the injection of gr. $\frac{9}{13}$, $\frac{7}{11}$, or $\frac{9}{15}$, they do not appear to suffer, and become quiet. In cases of older children injections of from gr. $\frac{9}{10}$ to iij are sufficient to cause the complete disappearance of all manifestations, whether secondary or tertiary.

As to the number of injections, Scarenzio's first views have been proved to be well founded. Gr. vj of calomel are ordinarily sufficient to cause all syphilitic accidents to disappear. This represents four injections of gr. iss,

given two at a time, the interval between the first and second two being three weeks. These four injections will replace all the arsenal of pills, frictions, washes, etc., and the patient only needs the physician once in three weeks.—*Annales de Dermat. et Syphil.*, February, 1884.

Chloroformic Albuminuria.—At the meeting of the Académie de Médecine, on February 12, M. Bouchard read a paper on "Experimental Study of Death after Subcutaneous Injections of Chloroform and Chloroformic Albuminuria." In 1876, M. Bouchard injected ♏xv of chloroform into a rabbit, causing death in about twenty-five minutes. In cases of this kind an intense albuminuria is caused, often accompanied by hæmaturia. This albuminuria may last for twenty-four hours if death does not take place.

Recently M. Bouchard has performed a series of experiments on rabbits, in order to study the subject more fully. If one injects ♏xij of chloroform into the rabbit, albuminuria always follows, and death takes place in three out of four cases. If ♏vij are injected, three out of four cases die; if only ♏iv are injected, about one-half of the cases die; and if only ♏j–iij are injected, death does not occur unless the injection is repeated.

In these cases, dogs also having been used, M. Bouchard has never, at least in those which survived, seen any evidence of gangrene or phlegmon at the point of injection. Histological examination of the kidneys showed congestion and extravasation of blood into the canaliculi, without epithelial lesions. He has been asked whether the albuminuria and death may not be the result of reflex action produced by irritation of the nerves at the seat of the injection. Having divided the sciatic and crural nerves on the same side, he injected the chloroform into the cicatrix at the seat of the wound. The usual results followed. He therefore rejects the reflex theory.

All his experiments go to show that these accidents depend upon poisoning, upon the absorption of the chloroform. This view is confirmed by the fact that the inhalation of air mixed with chloroform vapor causes the intense albuminuria and hæmaturia, although the amount inhaled may be so small that neither anæsthesia nor sleep is produced. But the albuminuria caused by the inhalation is not followed by death; and, on the other hand, the intravenous injection of ♏v of chloroform, dissolved in alcoholized water, though it caused immediate and profound narcosis, with albuminuria and hæmaturia, death did not follow.

This albuminuria, then, seems to depend upon poisoning, whether the poison acts directly upon the elements of the kidneys at the time of elimination, or whether, being carried into the nerve-centres by the blood, it there influences the parts presiding over the nutrition and circulation of the kidney. But why the injections should cause death, and the inhalations and intravenous injections do not, is still unknown.—*Le Progrès Méd.*, February 16, 1884.

Resection of the Stomach.—Dr. Zamboni reports a case of resection of the stomach for carcinoma of the pylorus. The tumor, limited to the pyloric region, was as large as a lemon. A few omental glands and a portion of the vena portæ were the only other structures affected. The patient was in an extremely unfavorable state at the time of the operation. The abdomen was opened by a long median incision. The resected portion included a part of the greater curvature, and the pyloric portion of the stomach. The operation was strictly antiseptic, but the patient died on the seventh day of purulent peritonitis. This is the fifth resection of the stomach performed in Italy, all the cases having terminated fatally.—*Gazz. degli Ospitali*, Feb. 27, 1884.

Therapeutics of the Lochia in Puerperal Affections.—Dr. G. Eustache, in a recent paper in the *Journal des Sciences Médicales de Lille*, 1884, p. 1, says that the therapeutics of the lochia consist in—

1. Avoiding the retention and stoppage of the flow in the uterus, or vagina, or at the vulva. 2. Modifying, by topical applications of liquids, the state of these surfaces, if they are injured. 3. Also modifying secondarily, by the same means, the offensive qualities of the discharge.

From this it is evident that these means should be employed whenever there is any lesion of the genital passages, especially in metritis; and they should be employed as often as possible before the morbid process has invaded the deeper parts, the tubes, ovaries, and peritoneum. To fulfil these indications, the means are: 1. *Ergot*, which, given in small doses, two or three times a day, prevents the retention of the lochia; 2. *Intravaginal injections*, for which he preferably uses a solution of carbolic acid (1 to 100). The irrigations are made morning and evening, one or two being used until the liquid returns clear. 3. *Intrauterine injections*, which should only be used when there are symptoms of metritis. For these Dr. Eustache uses the carbolic solution (1 to 100), at 86° to 89° Fah., and an irrigator holding a quart, to the tube of which he fastens a rubber tube, or an ordinary double-current tube. The tube is carried into the uterus to the depth of two or three inches. The irrigation should occupy from five to ten minutes.—*Revue Méd. Franç. et Etrang.*, February 16, 1884.

Laparo-hysterotomy.—This operation was performed on February 6, by Dr. Luigi Casati, in the hospital at Forlì, upon a woman, æt. 35 years, for carcinoma of the uterus and ovaries. The operation lasted forty minutes. On the fifth day the patient was in excellent condition.—*Gazz. degli Ospitali*, February 20, 1884.

Extrauterine Pregnancy; Laparotomy.—At the meeting of the Académie de Médicine, on December 11, 1883, M. Lannelongue presented two photographs representing two infants removed, by laparotomy, from two women, the subjects of extrauterine pregnancy. The operations were performed by M. Lucas-Championnière, at the Tenon Hospital, on June 6 and August 3, 1883. The first photograph was that of a male child, seventeen and six-tenths inches long, and weighing three and three-quarter pounds. On opening the abdomen of the mother, the child was found in a sea of pus, and already considerably decomposed. This was at the fifth month of pregnancy.

In the second case, the operation was performed at the twenty-sixth month. The fœtus was adherent to the wall of the cyst, and had to be extracted piecemeal. The women recovered without accident.—*Archives de Tocologie*, January, 1884.

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ANTISEPTIC SURGERY IN MILITARY PRACTICE.

THE address of SURGEON-MAJOR GODWIN on "Antiseptic Surgery in its Application to Field-Service," delivered before the Woolwich Military Medical Society, and published in the *British Medical Journal*, February 23, 1884, elicited a most interesting discussion, in which a number of civil practitioners took part, and which may profitably be noticed in connection with a similar discussion which appeared in the *Verhandlungen der Deutscher Naturforscher und Aerzte in Freiburg* Versammlung 56, 1883.

Both the English and German surgeons were agreed, first, that unless in case of great emergency, as, for example, one of hemorrhage, or severe compound fracture, the wound must not be fingered, probed, or manipulated by the surgeons in the front; and, secondly, that the surgeons in the advance line should limit themselves to provisional protection and occlusion of the wound with some form of antiseptic dressing, which, for obvious reasons, must be cheap, simple, portable, and of small bulk, and, if possible, carried by the soldier himself. The first dressings having been applied, further interference in ordinary cases would not be required. In more severe ones, however, the wound would receive definite and more elaborate attention at the field-hospital.

As might naturally be expected, various materials were recommended for the "first field-dressing," but the general sentiment appeared to be in favor of corrosive sublimate and iodoform. Sir Joseph Lister, Maas, and Beck spoke in the highest terms of the bichloride of mercury; and it may interest those surgeons who have not adopted antiseptic precautions in their operations, to learn that the spray and carbolic acid do not constitute so-called Listerism. In regard to the former, Sir Joseph says, "It would not at all break my heart if I were told that I should never be allowed to use the spray again in my life; I am satisfied I could, by other means, get essentially the same results." Discarding, then, the spray, as not being essential to success, and preferring corrosive sublimate to carbolic acid on account of the great volatility of the latter, he thought that rags steeped in a one to one thousand watery solution with glycerine—which renders the sublimate very soluble—and hung up to dry, would constitute a dressing which was easily prepared, must prove efficacious, and would last for any length of time. Despite his faith in corrosive sublimate, he, however, was of the opinion that iodoform, which combines the advantages of being not bulky, portable, and little soluble in the discharges of a wound, was the best agent for the first dressing; and this view was shared by Sir William MacCormac, Deputy Surgeon-General Marston, Lesser, and Kuester. The powder may, as suggested by Lesser, be carried by the soldier in an empty cartridge, around which are wound a bandage, about four yards long, a piece of absorbent lint or cotton, and a three-cornered handkerchief.

While iodoform does possess undoubted merits, it is not an antiseptic in the true sense of the term. Hence, we think that it should be employed as an accessory to a corrosive sublimate dressing. If the preparation of the first dressing were left to us, we would recommend the following, which would make a package that could be readily sewed in the flap or breast of the soldier's coat. A pad of absorbent lint or cotton and a bandage four yards long, which had been soaked in a solution of one part of corrosive sublimate, five parts of common salt, ten parts of glycerine, and one thousand parts of water, and subsequently dried, along with forty grains of iodoform wrapped in waxed paper or rubber tissue, and a triangular bandage, the whole being contained in an impermeable wrap to protect it from dirt and wet. The wound having been sprinkled with the powder, the corrosive pad is secured over it with the bandage, and the handkerchief used as a sling, in the case of injury to an arm.

Prepared in the way mentioned, the chloride of sodium not only promotes the solubility of the mercurial salt, but renders it stable, by preventing its conversion into calomel. Unless this precaution be taken, the ordinary solution, with the addition of a small amount of glycerine, cannot be relied upon to last any length of time, as is asserted by Sir Joseph Lister.

If the dressing is not sewed in the soldier's uniform, it should not be entrusted to him, since Beck states that, in 1870-71, when no such provision was made for its security, all save two soldiers had thrown it away, and Prof. Longmore declares that, in Egypt, the sanitary instructions issued required the dressing to be carried in the left-hand pocket of the trousers, when a large number of the trousers had only one pocket, and that was on the right side and usually too small to contain the packet.

BLEEDING IN PUERPERAL ECLAMPSIA.

In a little volume just issued, Dr. E. Michener urges bloodletting in the treatment of puerperal eclampsia. He has collected all the cases of this disease which have occurred during the present century in an area of about two hundred square miles, Avondale, Chester County, Pa., being the centre of this area. The number of cases is forty-four; but some are reported by non-professional persons, and, therefore, furnish a doubtful basis for comparison and conclusions.

One fact, clearly established by Dr. Michener's statistics, is that eclampsia is much more frequent in recent years, and, like Peter, of Paris, he makes the general disuse of bleeding in pregnancy the chief cause of this greater frequency. Dr. Michener does not seem to have given any consideration to the increase of population as in part explaining the greater number of eclamptic patients.

In one of the forty-four cases collected, the treatment was not known, but as it occurred early in the century, it is quite as probable that depletion was used as that it was not, and this case was fatal; three of them were treated by irregulars, and these cases also died; of course their treatment is not known, and all, therefore, may be thrown aside so far as teaching anything is concerned. Then six are recorded in which bleeding was not done, and five recovered, that is a little over eighty-three per cent. There remain then thirty-four patients, all of whom were bled, and of these twenty-six recovered, and eight died; that is, the mortality was somewhat over twenty-three per cent. But re-examining the record, we find that four did not have, but were only threatened with convulsions, and, therefore, they should not be included. We have then thirty cases of eclampsia treated by bloodletting, and eight of the patients die; that is, the mortality is 26.66 per cent., a result which, compared with that following the non-depletion, is not remarkably encouraging. Such is the brute logic of the figures Dr. Michener has given—an advantage of ten per cent. in favor of not bleeding.

But let us be just to Dr. Michener, for the cases in which bleeding was not done, and which recovered, were mild attacks. And this brings us face to face with the great difficulty in deducing conclusive truths in therapeutics, even from a large number of cases. No two patients are precisely alike in themselves, or in their diseases, and he is the wisest doctor who selects and adapts his remedies to the individual, rather than fixes an unchanging law of treatment for a disease. Bloodletting in the majority of cases of eclampsia is an invaluable remedy, a remedy more likely to be too seldom than too frequently used in these days, but all eclamptic patients are not to be bled, nor all to be bled the same amount. The recent investigations of Charpentier show that more cases recover after moderate, than after free depletion.

Further, the practitioner should not forget that in some cases the anæsthetic is better than the antiphlogistic treatment, and that in all cases in which the latter is pursued the former usefully supplements it. The results from chloroform which Braun had, sixteen cases, all recovering; and those of Chailly, seventeen recoveries out of nineteen; and of Triaire, five out of five; and those which Froger has collected, quoted by Charpentier, only four per cent. of deaths when chloral alone was used, ought to make one cautious in declaring that bleeding is the only salvation for the eclamptic.

THE STREET-CLEANING PROBLEM.

The cost of cleaning the streets and removing the refuse of a city is necessarily expensive, since the material removed possesses but trifling commercial value, and there is, therefore, little inducement to engage in the work of its utilization. The custom that prevails in American cities of spreading out the population over wide areas, causes the extent of street surface to be large in proportion to the population, and the expense of its care relatively great. The generally inferior quality of street paving is another impediment to thorough work, and a cause of the expensiveness of satisfactory cleansing. These are some of the reasons put forth for the inefficiency of street-cleaning operations in most of our cities; but they are evasive, unsatisfactory, and inadmissible.

Clean streets, at whatever legitimate cost, are imperatively demanded in the interests of the health, comfort, and convenience of the people; and no plea or excuse, or any obstacle whatsoever, can safely be permitted to antagonize successfully this important sanitary requirement. There is nothing intricate, puzzling, nor impracticable in the business of street-cleaning; but judging from the loud complaints that have filled the press of the country the past winter, it would seem to be a problem more difficult of solution than the perplexing question of the pacification of the Soudan.

It is a short-sighted policy that permits the streets of a city to be defiled with filth accumulated for months. The annoyance to citizens, the damage to apparel, equipages, and merchandise, not to speak of the far more serious result of injury to health, are consequences which could easily and profitably be averted, if the authorities were capable, honest, and willing, and fully realized the weight of responsibility resting upon them. The season of mud is well-nigh passed, but another, and still more serious and dangerous annoyance, awaits the public. With the advent of spring, under the influence of clear skies and winds, the filthy compound that defiles the public ways and places, will become dried and converted into dust, and be carried in clouds hither and yon, making the atmosphere stifling, and polluting everything with which it comes in contact.

Filth produces and aggravates disease. In the form of dust it is particularly obnoxious. Recent scientific investigations have rendered it probable that the germs of disease are conveyed by its agency. In connection with experimental investigations relating to the etiology of malarial fevers, Dr. Sternberg has observed the fact, that, during the summer months, the mud in the gutters of New Orleans possesses an extraordinary degree of virulence, due to the presence of pathogenetic varieties of bacteria. He remarks, "the more I study this subject, the more probable it seems to me that in this direction lies the explanation of many problems which have puzzled epidemiologists, and that the sanitarians are right in fighting filth as a prime factor in the production of epidemics—a factor of which the *rôle* is easily understood if this view is correct."

In this connection, we cannot refrain from quoting the timely remarks of one of our best scientists, on this homely question. "When we reflect," he writes, "that this is the dried and pulverized dirt and filth of our streets, derived from all kinds of refuse matter, its dangerous qualities may be suspected if they are not clearly obvious. Conveyed by the winds, it is diffused everywhere, and settles upon and adheres to everything. We inhale it, drink it, and eat it with our food. A speck of mud on our bread excites disgust; but who minds the same thing when it is nothing but a little dust? If our food just brought from the market or the provision store be examined with the microscope, it is found to teem with particles of dust, consisting of fine sand, bits of hay and straw, filaments of cotton from old paper and rags, wood fibres, hairs and scurf scales of man and beast, starch grains, spores, etc. Recent investigations render it probable that dust contains the germs of decomposition, gangrene, and contagious diseases."

It is not a fastidious sentiment that clamors for the rigid cleanliness of our streets and public places, but an instinctive disgust for what is offensive and vile; a natural aversion and educated antagonism to that which may be disease-breeding and pestilential, and, therefore, harmful.

In the light of recent knowledge, the responsibility of those charged with the duty of maintaining public cleanliness is more than ever serious, and no effort should be spared in compelling its fullest realization. An indictment at law in the name of the people, against the recalcitrant agents of the city, for maintaining a public nuisance, would establish a useful precedent, and go far towards inaugurating a reform in this badly administered branch of the public service.

ANTIVIVISECTION AGITATION.

In its editorial of March 8, 1884, *The Philadelphia Medical Times* says, in reply to our recent comments on its position as regards the use of animals in research: "That vivisection conducted in a proper manner is recognized by medical science as a legitimate and necessary means of advancing research, and of adding to our store of knowledge." As to this there can be no difference of sentiment. It is legitimate and needful. The society, the *Times* speaks of and for, desires, it says, "to restrict this practice within proper limits." It would be well then, as a preliminary, to show that here in Pennsylvania it has not been so restricted by the kindliness and common sense of the very few persons who in our time have used it.

In fact we deny the cruelty charge which is made by the *Times* when it quotes the anonymous "many who have declared that vivisection is overdone, and is *greatly abused* in this country." We ourselves speak with unusual knowledge when we reply that this allegation is not true. Pray who are the "many?"

But let us agree, for argumentative advance, that restriction is desirable. Have we any now? In the University of Pennsylvania the laboratories for physiology are used by four persons, or at most five, at somewhat long intervals. Students are never alone in the laboratory. Third course students are not permitted to conduct researches and employ animals in aid of these, without the most careful supervision. If they wish to engage in such pursuits, they must apply to the Professor or his Demonstrator, and show that the object in view is desirable, and that they are competent. Printed rules and the constant custom of the laboratory enjoin the use of anæsthetics. Now what more could be desired? In fact the University discourages physiological work by students, and it is therefore uncommon. More has been done by such workers, and some of it

very good work, in the pathological rooms. But this involves nothing worse than inoculations. The restriction is here, also, in wise and thoughtful hands. Can we get anything better by inviting some kindly sentimentalists to legislate for us? To do so is to admit that we have done wrong and need other masters than our consciences.

The *Times* "is authoritatively informed that the *present* movement does not seek to abolish or to interfere with scientific experimentation further than to *urge* that it be done in as humane a manner as possible."[1] If this be all, we do not object much to being urged to do what we now do. If we are asked to go beyond being urged, we are met with three distinct difficulties. If the present movement should result in a Restriction Act, surely no one believes its advocates would be willing to leave its restrictive capacities to the great medical bodies who now control it, or would exclude laymen—or worse, laywomen—in which case we should be in the cheerful situation of our English friends. But if the "*present*" movement be only for restriction, and of course we admit the honesty of the position assumed by the *Times*, who will assure us against a new campaign in the interests of total abolition? "*Anti*" covers a good deal. With the exception of a few gentlemen not profoundly interested, the Society now engaged in a needless task does not consist of material such as invites belief in its moderation. "Abuse and ridicule do not convince," says the *Times*. No, that is true; but what shall we say of the Whitechapel alleys, placarded with sensation chromos by the English Society with aims like those we are now criticising? If Magendie may be quoted on one side, surely these examples of sentiment run mad to brutality may be quoted by us as a reply and a warning.

The *Times* passes lightly over the calumnies with which some prominent men have suffered here among us, but by them at least they are not forgotten; and so far, here and abroad, the abuse has come in most copiously from the antivivisection side, and, as a rule, has been—in this city at least—endured in silence.

To sum up:

We believe that vivisection is not abused in America.

We know that it is sufficiently restricted by the great medical schools which now control it.

We fear to accept legal restraint, not knowing who will administer it. We dread the fate of the British physiologists.

We do not believe the American Society will pause at restraint any more than has been the case in England.

[1] Italics are ours.

ACUTE ARTERITIS CONSECUTIVE TO TYPHOID FEVER.

DR. BARIÉ calls attention, in the *Revue de Médecine*, Nos. 1 and 2, 1884, to acute inflammation of the arteries as a sequel of typhoid fever, and his paper constitutes a valuable supplement to Dr. Keen's Toner Lecture "On the Surgical Complications and Sequels of the Continued Fevers," delivered in 1877. Confining his investigations to the larger arterial trunks, the author finds that the affection is nearly always met with in the lower extremities, the vessels implicated, in the order of their frequency, being the posterior tibial, femoral, dorsal artery of the foot, popliteal, and anterior tibial. As a rule, unilateral and localized on the right side, it appears during convalescence, or when the patient leaves his bed, and is witnessed as frequently after the lighter as after the more severe type of the disease.

From the stand-points of anatomical lesions, clinical evolution, and termination, two varieties of the affection may be distinguished, namely, acute obliterating arteritis and acute parietal arteritis. The first is characterized by embryonal infiltration of all the tunics, with the formation of a secondary thrombus, and invariably terminates in dry gangrene; while the second variety is merely an inflammation without such a clot, and always terminates in recovery without gangrene.

Dr. Barié believes that the two principal factors concerned in the pathogenesis of the affection are, first, local and permanent irritation of the walls of the arteries induced by a special infectious germ, the bacillus typhosus; and, secondly, profound disturbances of vaso-motor innervation, or vaso-motor spasm. With regard to the symptomatology and treatment, there are no new additions to the observations of Dr. Keen.

In connection with this subject it may be mentioned that Vulpian records, in No. 2 of the same journal, an interesting case of right hemiplegia and aphasia, due to thrombosis of the left Sylvian artery during the course of typhoid fever. Examples of a similar nature are recorded by Dr. Landouzky, in his *Thèse d'Agrégation* "Des Paralysies dans les Maladies Aiguës," 1880.

ANÆSTHESIA BY THE MIXED METHOD.

WE have several times called the attention of our readers to the mode of producing the anæsthetic state by the subcutaneous administration of morphine and atropine, followed by the inhalation of chloroform. This "mixed method" has been largely practised by M. Aubert, of Lyons. He has recently addressed a note to the Society of Biology of Paris, reaffirming the advantages of this method. He finds it safer than the administration

of the anæsthetic by itself, but it possesses other important advantages: the stage of excitement is very slight; profound anæsthesia is obtained in about three minutes; vomiting very rarely occurs, either during the anæsthesia or subsequently, and the whole process of inhalation is greatly facilitated.

The method of Aubert has been submitted to the crucial test of experiment by MM. Paul Bert, Morat, and Dastre, who find that the clinical observations are entirely supported by trials on animals. In view of these facts, and the powerful advocacy of Bernard, Nussbaum, and Aubert, abroad, William Warren Greene, Reeve, and others in this country, it is surprising that so little attention has been paid to the method by practical surgeons.

REVIEWS.

The Field of Disease; a Book of Preventive Medicine. By Benjamin Ward Richardson, M.D., LL.D., F.R.S., Fellow of the Royal College of Physicians, etc. 8vo. pp. 737. Philadelphia: Henry C. Lea's Son & Co., 1884.

The author of this book is already well known on this side of the Atlantic through his numerous and able contributions to medical literature, and by his writings upon the more prominent topics of public health and hygiene. The announcement of a treatise by him on the comprehensive subject of preventive medicine has been received with great satisfaction, not only on account of his eminent qualifications for the undertaking, but also by reason of the need of a standard work of this character.

The volume before us, a handsome octavo of nearly eight hundred pages, is a classical production, comprehensive in scope, logical in arrangement, rich in material, sound in doctrine, and instructive in its teachings. Though intended primarily for "the intelligent reading public," the physician will find it to his advantage to consult freely its pages.

The work is divided into three books, which contain a description of natural diseases, acquired diseases, and the origins, causes, and preventions of disease.

In the first book, the author has presented a carefully written description of the general diseases affecting mankind, taking as a basis the classification adopted by the Royal College of Physicians. To render this work intelligible to the general reader, a preliminary chapter has been inserted upon what may be called the attendant conditions of disease, such as fever, inflammation, congestion, etc. For the same reason, a physiological outline of the systems of organs of the body has been prefixed to the description of local diseases. An interesting chapter on diseases from natural accidents concludes the first book.

In the second book, upon acquired diseases, a classification according to causes has been adopted, because it is the more natural course to pursue. The affections have therefore been arranged under the following heads: 1. Diseases induced or acquired from inorganic and organic poisons. 2. Diseases induced or acquired from physical agencies, mechanical and general. 3. Diseases induced or acquired from mental agencies, moral, emotional, and habitual.

The third book, containing a practical summary of the origins, causes, and preventions of disease, is the most useful part of the treatise, because of its practical bearing upon the affairs of every-day life. Only the causes and preventions of the more common diseases, such as yield the ordinary mortalities, are considered, under the belief that "if we could discover the means of preventing these diseases, the whole field of disease would be so reduced there would be little left to be done except to maintain, systematically, the methods of prevention in all their integrity."

The origins and causes of disease are clearly and intelligently discussed under the following heads: 1. Congenital, hereditary, and constitutional origins and causes. 2. Atmospherical or meteorological origins and causes. 3. Parasitical origins and causes. 4. Zymotic origins and causes. 5. Accidental origins and causes. 6. Social and psychical origins and causes. 7. Senile degenerative origins and causes.

In the part devoted to the consideration of the preventions of disease, the subject is discussed in connection with the varieties of origins and causes of disease, because preventive measures naturally group themselves in position by the side of causes. The three grand agencies concerned in the enumeration of measures of prevention are the *personal*, the *municipal* or *local*, and the *central* or *governmental*. In prescribing the rules applicable to the different groups of disease, a classification, according to their agencies, has been uniformly observed. This systematic arrangement is still further amplified by the introduction of subheads, a plan which is exceedingly serviceable for ready reference. The material contained in the concluding chapter, on the preventions of disease, has been most carefully selected, and accurately represents the best knowledge on the subject.

This book, taken as a whole, is the best of its kind that has ever been published. It is scientific, methodical, and practical. The time of its publication is most opportune. The *people* have never taken so great an interest in health questions as at the present time; and, as this work is intended for the public, its usefulness is insured. The physician will also be profited by consulting its pages.

The work of the publishers leaves nothing to be desired.

Traité des Fièvres, Bilieuses et Typhiques des Pays Chauds. Par le Dr. A. Corre. Pp. 567. Paris: 1883.

In this interesting work we have an excellent account of the fevers which prevail in hot countries. The author adheres to the nomenclature familiar to the practitioner of the South and West. Thus he recognizes a "gastric" and a "bilious" fever. These are different from malarial fevers, which form a distinct group. He gives a very full and excellent description of hemorrhagic malarial fever, and a still more elaborate account of the typho-malarial form. Yellow fever receives careful and thorough treatment, and the section on typhoid completes the work.

The strongest part of this treatise is the clinical. Each form of fever is carefully delineated, and its clinical characteristics well defined. The pathological descriptions are less happy and less accurate, although fairly representing the present aspect of the subject. Take it all in all, this is a treatise which may be fairly regarded as excellent, and which can be recommended as worthy of perusal by anyone desiring information on the subject of fevers.

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, March 6, 1884.

THE PRESIDENT R. A. CLEEMANN, M.D., IN THE CHAIR.

DR. PACKARD demonstrated to the Society a new method of applying

AXIS TRACTION

to any ordinary obstetric forceps. The device consisted of two steel hooks arranged to catch in the fenestræ of the blades of the forceps, and terminating in rings through which a wooden handle is to be passed. The handles of the forceps are to be lashed together.

DR. SMITH remarked that Dr. Tarnier's first suggestion was to pass a cord through holes drilled through a widened portion of the blades, at the point at which handles are now attached. The hooks exhibited by Dr. Packard did not draw from the right point, and he thought there would be difficulty in adapting them when the head was high up.

DR. GOODELL thought that Tarnier was anticipated in the cord attachment by another French physician.

DR. B. F. BAER read a paper on

THE SIGNIFICANCE OF METRORRHAGIA ABOUT AND AFTER THE MENOPAUSE.

Metrorrhagia recurring about the menopause is as likely to be the result of disease of the uterus or its appendages as it is at any period previous to that time. The popular belief that floodings at the change of life are physiological, often results in harm. That the blood-loss is depuratory or critical, and that it protects the vital organs from injurious congestion, is erroneous. Where health exists the cessation of menstruation will be attended by no more aberration of function than is seen in its establishment. An analysis of twenty-two hundred cases treated in hospital and private practice, shows that nearly the same number of women sought advice during the establishment and the decline of menstruation, and it further shows that the numbers rapidly increase as the period of greatest fecundity is reached, and decline after it is past.

Epithelioma of the cervix may result from injury of that organ, but also requires some peculiarity in the structure of the tissues, which renders them susceptible to an induced dyscrasia. When a woman in the midst of the fertile period suddenly ceases to bear children, there is often some local cause for it. There is some causative relation between acquired sterility and cancer. It is safer to believe the disease of local origin, for we will then endeavor to discover and remove all sources of irritation and possibly prevent its development. Detailed histories of a number of cases are given to illustrate the truth of the positions assumed. Where the menopause is retarded beyond the usual period, the cause can often be found in some diseased condition connected with the sexual system, and as a rule it is an old standing trouble. When metrorrhagia recurs after the menopause has been fully established, it is almost invariably the result of a pathological change in the tissues of the uterus.

DR. GOODELL agreed almost wholly with what Dr. Baer had said; he thought the dangers of the menopause much overrated. Cancer and fibroids of the uterus occur more frequently at that age than any other, and have caused the popular dread. Although hemorrhage is always pathological, its cause cannot always be discovered, and in this dodging period serious hemorrhage may occur and no dangerous condition exist. He would like to believe that cancerous growths had a benign incipiency, but cannot go so far. The microscopists make many mistakes in ascribing malignancy to growths removed from the uterus. Dr. Goodell then gave a number of cases in which experienced microscopists had given prognosis of early fatal termination, based upon the cell formation of growths removed from the uterus, but these cases had recovered and now showed no evidence of any diseased condition. With regard to the small proportion of cancerous growths following laceration of the cervix uteri, the Doctor called attention to the large number of Irishmen using clay pipes, and the small number of lip-cancers, and yet it is universally acknowledged that the use of a clay pipe is the principal cause of such growths. Bloodletting is practised very freely in Turkey and the East; and as a consequence women get very stout; such are more liable to profuse hemorrhage at the dodging period.

DR. WILLIAM T. TAYLOR reported a case of

MALARIAL POISONING IN A NEW-BORN BABE.

We have frequently observed fevers of a malarial type in very young children, in some even during the first year, which were ushered in by a convulsion or other prodrome, without a rigor, as occurs in older persons, and their character is only recognized by a repetition of the attack in a day or two. But the youngest subject of this disease which I have met with is the following case.

Mrs. A. R., during her second pregnancy was affected with malarial fever, and, although she was then residing at the sea-shore, was obliged to take occasional doses of quinine to control it. She returned to her city residence at the end of the season, but continued using quinine from time to time until the end of her utero-gestation, which was completed in November last, when her babe was born. Her labor was natural and easy, and she had no unfavorable symptoms. The child appeared healthy, was of good color, but was smaller and feebler than her first-born at its birth. As she had a good supply of milk, it soon drew the breast quite vigorously.

About one week after its birth, the nurse called my attention to "weak spells" which it had occasionally, accompanied by coldness of the skin, a feeble circulation, and prostration which continued for fifteen or twenty minutes, and were followed by a clammy perspiration. By the application of heat to the body, and

giving it a little brandy and water or other stimulant, it would revive.

I observed that these "spells" had a periodicity occurring every two or three days, and considering them malarial, I gave the mother quinine and valerianate of iron, which, acting therapeutically through the milk, soon caused the "spells" to cease, and the babe became well and fat. I also gave it small doses of the elixir of cinchona for several weeks.

This child must have contracted this disease whilst in utero through the placental circulation, for being born in a perfectly healthy locality it was not exposed to any external malarial influence.

When labor began the quinine was stopped, and was not resumed until the condition of the child required it, when it soon showed its antiperiodic action by completely arresting these "weak spells," for now the child is perfectly well.

Dr. R. P. Harris related a case of parallel character, which had occurred some years ago in a malarious neighborhood. The mother was under treatment before labor. The child had chills and fever when quite young, and was treated through the mother.

Dr. W. H. Baker reported for Dr. Walter F. Atlee a case of

ABDOMINAL SECTION.

Mrs. E. C., of Erie, Pa., was brought to this city by Dr. Edward Cranch. She was forty-five years of age, married, but had had no children. Her menses were regular and very abundant. She was a stout woman in excellent health. Four years ago she first noticed the tumor in the centre of the abdomen. Dr. Cranch reports that the probe enters the womb the normal distance only.

Diagnosis.—A multilocular cyst with thick walls and very glutinous liquid, or a fibroid tumor of the uterus. The sense of fluctuation was not distinct.

Operation.—February 4. After the usual preparation, cut down, found a solid tumor, opened it, took out as much as possible of the contents, and got out the envelopes; the incision was about five inches in length. The tumor grew from the fundus of the uterus. It was transfixed, tied, and dropped. The patient never rallied after the operation, and died on the 6th, of shock. There was no hemorrhage. The operation was all over in twenty-five minutes.

Dr. R. P. Harris saw the patient prior to, and assisted in the operation. The lady had an appearance of health, was quite robust, and there was nothing in the contour or expression of her face indicative of ovarian cystoma. In a conversation with her sister and family physician, he learned that the diseased growth was first noticed by this sister, who remarked upon the central prominence of the abdomen of the patient, who was at the time lying on her back on the floor engaged in playing with a little child. When the attention of the patient was directed to the fact that her abdomen presented a central elevation even when flat upon her back, she readily detected the existence of something abnormal. Dr. Harris remarked to the physician that the history of the case indicated the existence of a tumor at the fundus uteri. When the morbid growth was exposed it did not present the appearance of an ovarian cyst; neither did percussion indicate the presence of fluid prior to incising the abdomen, except by a surface wave. There was no wave transmitted from hand to hand. The surface wave was found due to some ascitic fluid. As no fluid escaped by tapping, the tumor was opened and its contents torn away in pieces, so as to reduce it sufficiently, when it was drawn through the wound, ligated at its union with the fundus uteri, and cut away. During the shelling process a considerable loss of blood took place, and the appearance of the patient was that of great prostration. The tumor had no pedicle, being sessile in its attachment to the uterus.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 25, 1884.

The President, S. Oakley Van der Poel, M.D., in the Chair.

Dr. E. C. Spitzka read a paper entitled

THE PATHS OF COÖRDINATION.

Progress in the localization of cerebral functions, he said in opening, had followed two different lines of research. The first was the observation and registration of phenomena following the irritation of the cerebral centres in experiments or in connection with disease. The second consisted in the anatomical study of the facts connecting certain centres with certain peripheries. The first was confessedly more or less empirical, and the two methods might be compared to two parties making an exploration of an unknown continent from different directions; the first instituting a survey of the coast and its indentations, and the second, starting from the interior and tracing out the water-courses and mountain-ranges in their relations to the coast. Between the two there would be a vast untried region, gradually diminishing in extent as the two parties approached each other. So was it in regard to the brain, in which the great intermediate region constituted a labyrinth not yet investigated; but the progress which was constantly being made in elucidating new points was gradually rendering its boundaries more and more restricted.

The case upon which the paper was based was one which Dr. Spitzka had the opportunity of studying for several years, and finally of making an autopsy in. It was one of pure unilateral ataxia without paralysis. The patient was a native of Germany, a male, and fifty-eight years of age when the trouble commenced. Dr. Spitzka saw him for the first time two months after its onset, which was characterized by a slight apoplectiform seizure, followed by numbness and impairment of co-ordination in the right arm and hand, accompanied by a ringing sensation in the part. The difficulty afterwards extended to the left lower extremity, and there was a marked clumsiness in gait, which was neither paralytic nor strictly ataxic; giving the impression of a vertiginous sensation. All the movements were of a more jerky character on the left side than on the right. Dr. Spitzka said that he made the diagnosis, at the time, of hemorrhage in the pons Varolii, and gave a qualified, unfavorable prognosis. He then gave an elaborate history of the symptoms and progress of the case, which

terminated fatally about five years after the original trouble was noted.

For two weeks before the patient died he suffered from intense cold, and death was preceded by dysphagia, delirium, and increasing coma. The main lesion discovered at the autopsy was a secondary degeneration affecting principally the stratum intermedium, which commenced about the lower third of the pons Varolii, just to the right of the median line, and extended on the right side down to the decussation of the pyramids, where it crossed to the left side. Dr. Spitzka made six hundred sections at different points in the course of the lesion, and it was found that scarcely a nerve-fibre was left in many parts. He said that there were but two cases on record resembling this. In the first, however, the anterior pyramids were also implicated, and hence its physiological importance was impaired. The second one, which was reported by Meyer, was, therefore, the only one which was strictly comparable to this. In regard to the sensation of intense cold coming on a short time before death, he said that at present he had under observation two patients suffering from paralytic dementia, in whom this was a prominent symptom. One of them was subject to successive chills, resembling those seen in severe malaria. Among the propositions that Dr. Spitzka advanced in connection with this case was one, that the stratum intermedium was probably continuous with the column of Goll, and, in conclusion, he said that he thought at least two and a half inches of the unknown labyrinth of the brain were cleared up by the light which the case threw on the paths of coördination.

DR. E. C. SEGUIN remarked that he thought Dr. Spitzka's interesting case would offer an explanation of some of the phenomena which he had observed in certain cases of his own, which he had studied during life, but in which he had not had the opportunity of making an autopsy. They were instances of brain-ataxia or hemi-ataxic tremor with parasthesia, and he had supposed them, on purely theoretical grounds, to be due to sclerosis localized in the hemispheres. Unlike Dr. Spitzka's, however, they were essentially chronic cases, and in none of them was there any history of an apoplectiform seizure. At the present time he had a case under observation in which there was ataxia of the right upper extremity, with no marked paralysis, but with some bulbar symptoms. There was slight impairment of articulation, and sometimes slight difficulty in swallowing. He thought it well to call attention to one or two difficulties in the way of adopting Dr. Spitzka's interpretation of his case. One was that the results of experiments served to show that the dorsal pyramidal or pineal decussation was sensory, and in this connection he mentioned the experiments of Brown-Séquard and others, in regard to the effect of hemi-section of the spinal cord in Guinea-pigs. So also, the symptoms produced by stab-wounds of the spinal cord, and the presence of tumors involving one-half of the cord, indicated the decussation within the cord of sensory conductors to the cerebrum. In the second place, while Dr. Spitzka had regarded ataxia as a symptom of the interruption of conduction by destruction of brain-tissue, Brown-Séquard had shown that it could be produced by simple irritation. This was very markedly the case in birds. In the human species, ataxic movements were observed when there was no secondary degeneration, and when the lesion was variously located in the cerebrum, the crura cerebri and the cerebellum. In post-paralytic chorea, as described by Dr. Weir Mitchell, a lesion was found in several cases in the internal capsule. Still, he was very much gratified that Dr. Spitzka had shown the results of this autopsy, and he could well see how it would throw some light on other cases, in connection with which there was more or less obscurity.

DR. SPITZKA said, in regard to Dr. Seguin's first objection, that he had not referred to sensation in his report of the case, but simply to coördination, and that Brown-Séquard did not allude to the muscular sense in connection with the experiments mentioned. After speaking of ataxia as a symptom of irritation, he went on to say that he did not believe the case on which he had based his paper would throw light on Dr. Seguin's cases, since he believed that they were of a different character, and belonged to the group of cases depending on a cortical or subcortical lesion. Thus there was a pure ataxia of intellectual type.

CORRESPONDENCE.

THE DWIGHT INSURANCE CASE.

To the Editor of THE MEDICAL NEWS.

SIR: I read your editorial of December 22, 1883, on the "Dwight Life Insurance Case." The case has attracted a great deal of attention, especially among the insured on this coast. Having been interested myself for many years as a life insurance examiner, I have followed the reports of the case pretty closely, and am satisfied that your views in regard to the case are entirely correct. You have stated, to my mind, the whole case in the few following sentences.

"The reason he had for taking so great an amount of insurance, may have been to secure large sums of money to his family and friends by a supreme fraud. When we reflect on the enormity of the crime, on his hopeful disposition and self-confidence, especially on the large enterprises which he had in view, it seems more rational to interpret his conduct by the light of other motives. From this point of view, the large insurance was intended to bridge over the period between the present impecuniosity, and that successful enterprise with 'millions in it,' which, as the testimony shows, he had entered upon. The disclosures of the post-mortem render it probable that he was in the incipiency of one of those forms of mental derangement characterized by expansive ideas. Pachymeningitis accompanied by a hemorrhagic extravasation is so common a condition in some forms of insanity, that we can hardly doubt its agency in this case. A large life insurance was a natural conception of a mind now about to enter on gigantic schemes of money-getting."

In confirmation of this view, allow me to give you a brief history of the following case: April 22, 1878, the agent of the Equitable Life Assurance brought to my office an applicant for examination; a gentleman whom I had known for several years, and whose family I had attended. I had known him as an active, intelligent, careful, temperate man; a lawyer by profession, but was then a broker; a man of most unexceptionable physique. I knew his means to be limited, and was surprised when I found his application called for fifty

thousand dollars. I expressed my surprise at the large amount; he replied that he had not thought of life insurance until a few hours before, when he met the agent on the street, who had suggested it to him, and that as he was about entering into some enormous schemes, the suggestion of life insurance was a good one, and he would, besides, take enough in other companies to make up two or three hundred thousand dollars. A man whom I knew to be without means, proposing to take two or three hundred thousand on his life, interested me at once. I drew him out on the grand schemes to which he referred, and found that they were wilder than the proposed enormous amount of life insurance. He was going to organize a grand mining company, which would have rivalled the schemes of John Law.

The man's manner was rather excited, his eye restless, and his pulse somewhat quick; in other respects he had an elegant physique, proportions about perfect. I informed him that his pulse was rather excited, and that I would have to postpone the examination to another time. He explained the condition of the pulse, saying he had been in the Board all day; there had been great excitement in stocks, and that he expected to make a deal that would at least net him a million or two. He was anxious that I would see him in the evening when his pulse was quiet, that he might consummate the application; as he would not apply to the other companies until he had passed this one; and that he would like to have at least a couple of hundred thousand on his life until he was successful with some of his grand schemes.

A few minutes after he had left, the agent came in and asked me if I ever had examined so perfect a risk. I replied that I had rejected him, that he was insane. The agent certainly took me for the insane man. He had known the applicant for years, had seen him almost daily on the street. I promised to reëxamine him in a week's time. About two or three weeks after the examination, there was a great excitement on the street; the applicant Willard had drawn his pistol and shot and wounded a man with whom he had had some little slight business trouble. (This was a new *rôle* for Willard.) He was immediately arrested and taken to jail. While his father-in-law was looking for bail, he met the insurance agent, who informed him that I had rejected his son-in-law Willard the week before for insanity. Acting from this clue, the father-in-law immediately summoned the Board of Insane Commissioners to examine Willard, and acquit him on the grounds of insanity. The Commissioners, after a careful examination, declared that he exhibited no traces of insanity; that he was perfectly sane and responsible for his acts. He was, however, soon bailed out; he was greatly excited and pained at what had occurred.

I was then sent for and consulted. I advised them to take him to the country to his mother's, a few miles above Stockton, where he could have perfect quiet, but for them to stop in Stockton on the way, and send for Dr. Shurtliff, who had been twenty years Superintendent of the Stockton Insane Asylum, and that I was satisfied that Dr. Shurtliff would recognize incipient cerebral disease as the real cause of his wild schemes and his attempt at shooting.

The next day they left town, stopped at Stockton and consulted Dr. Shurtliff, who found the patient much quieter, perfectly reasonable, and willing to put himself under Dr. Shurtliff's care. The doctor explained to him that this mental excitement was due to incipient brain disease, and that he had better go into the Asylum and be treated, which he did.

He was committed June 14, 1878, and remained in the Asylum until December 4, 1878, having improved some mentally, but weaker physically. Dr. Shurtliff made the following notes on the Asylum books: Paretic, but not demonstrative, except in the idea of wealth; shows paralysis in his gait, but not in speech. He died a few weeks after he left the Asylum, with cerebral disease. No post-mortem. There are strong probabilities that if I had accepted him (Willard) for fifty thousand dollars, other companies would have accepted him, and he would have had two or three hundred thousand dollars on his life within a week. And yet he had never thought of insuring his life until it had been suggested to him by accident on meeting the agent on the street a few hours before he made the application.

While the later history and death of Willard differs from Dwight, the conceptions to secure this great amount of insurance in both cases were probably the result of incipient disease. I must say, however, that I rejected Willard, not upon any objective or subjective symptoms of physical disease that I could detect, but purely upon the grounds that it would be unsafe to accept a man for life insurance who was so utterly reckless and regardless of the financial requirements necessary to carry out such enormous speculations. A sane mind must recognize that it requires some money, at least, to carry on enormous financial schemes and to pay the premiums on two or three hundred thousand dollars life insurance.

W. F. McNutt, M.D., M.R.C.S. Ed.,
Professor of the Principles and Practice of Medicine in the University of California.

THE VALUE OF LIME INHALATIONS IN DIPHTHERIA.

To the Editor of The Medical News.

Sir: In the number of your journal for March 1, 1884, there is an editorial on "The Treatment of Diphtheria." Lime is therein mentioned as a solvent of the false membrane, and it is placed next to diluted lactic acid in efficacy. The methods of application given are two in number. The first is that in which the lime is in aqueous solution, and is brought in contact with the diseased parts by means of a mop or spray producer. The second "has been effectively employed by having the patient breathe the vapor arising from slacking lime."

It is the last statement which forms the subject of my note. It is immaterial to ascertain who the originator of the method was, but from the fact that these directions are given in some text-books, are extensively practised, and are countenanced by the article referred to above, I have thought it not improper to examine into the value of using lime in this form.

A little reflection will lead one to suspect that lime vapor is only imaginary, and a simple experiment will confirm the doubt. If lime be contained in the steam which is developed during its hydration, it should be readily detected in the condensed fluid.

The vapors from slacking lime, and the distillations of the officinal lime water, as well as of milk of lime, give no response to calcium tests.

It is consequently evident from this that the value of the treatment depends on another agent. It is the vapor of hot water that has made the lime inhalations useful, and that steam has its advocates in diphtheria is mentioned in your paper.

Yours respectfully,

LOUIS KOLIPINSKI, M.D.,
Resident Physician in the Children's Hospital,
Washington, D. C.

NEWS ITEMS.

CHICAGO.

(*From our Special Correspondent.*)

THE HOSPITAL INTERNESHIP has finally become a popular thing among young medical men and hospitals in Chicago. A few years ago the County Hospital and Mercy Hospital were the only institutions where internships could be competed for. Now the Michael Reese, St. Luke, and Alexian Brothers' hospitals are added to the list. This season there has been manifested an unusual interest in the appointments in these hospitals, and so the number of candidates is large.

THE EXAMINATION OF THE INSANE.—A murder occurred about a month ago which illustrates at once the necessity of care in the examination of the insane, and the danger of insisting upon too rigid requirements in proof of insanity. Shortly before last Christmas, a man about fifty years of age, and in good physical health, but of exceedingly bad habits, was taken by his family to the Probate Court for examination. His wife and neighbors all testified that he was frequently subject to fits of the most violent and uncontrollable passion, and that he often did most uncontrollable things. He was adjudged sane, and his eccentricities attributed to intemperance. He was sent home, where he continued to live with his wife and children, and although he ceased drinking, his maniacal attacks grew more frequent and more constant. His family were too poor to send him to a private sanitarium, and felt that they were compelled to nurse him as best they could. As stated, about a month ago, after several days and nights of constant raving, he killed his wife in a most brutal manner.

INDIANAPOLIS.

(*From our Special Correspondent.*)

SMALLPOX has again made its appearance in this city, but so far has been almost entirely confined to the city. About two months ago, a case developed in the County Jail, in which about two hundred were confined at the time, the diagnosis of which was hindered by a simultaneous syphilitic eruption until the case was far advanced. Steps were immediately taken by our excellent Health Board to stamp out the plague by quarantining the jail and city station house, and vaccinating all the inmates with bovine virus. About thirty cases developed in spite of these precautions, which were all removed to the smallpox hospital as soon as the cases were diagnosed. About fifty cases in all have sprung up in the city, the greater number of the eighteen or twenty cases developed outside the jail, being recently discharged inmates. The source of the contagion has not been traced. The jail was in good condition as to cleanliness.

THE MEDICAL COLLEGE OF INDIANA.—At a recent meeting of the trustees of the "Medical College of Indiana," two new chairs were added, viz.: Diseases of the Skin, and a chair on Clinical Medicine. Dr. W. F. Hayes was elected Professor of Diseases of the Skin, and Dr. W. N. Wishard Professor of Clinical Medicine. Dr. Wishard is now Superintendent of our City Hospital. The College this year graduated forty-three.

THE INDIANA STATE MEDICAL SOCIETY MEETING has been postponed until after the meeting of the American Medical Association.

PANCREATIZED MILK.—At a recent meeting of the Marion County Medical Society of this city, Dr. F. A. Morrison, Physician to the Quilp's Orphan Asylum, read a paper on "Pancreatized Milk in the Digestive Troubles of Infants," in which he advocated the use of pancreatized mllk in raising babies by the bottle. He presented good evidence that it both cured and prevented vomiting and diarrhœa. He prepares it by adding one teaspoonful and a half of liquor pancreaticus to a pint of milk; let stand one hour; add five grains of bicarbonate of soda, and feed through the nursing-bottle. He also recommends it in acute gastritis of adults.

BERLIN.

(*From our Special Correspondent.*)

BERLIN STATISTICS IN 1883.—The statistical office of the city of Berlin (under the superintendence of Privy Councillor Boeckh) publishes the following figures which may be of general interest:

The monthly average number of inhabitants during the year 1883 was 1,207,114, with an average death-rate of 29.04 per thousand.

The month of July exhibits the highest mortality, 53.34 per thousand; the month of December the lowest, 23.54. The number of still-born children (which is *not* included in the foregoing figures) amounts to 1394, or 1.41 per thousand of the population; against 38,375, or 36.63 per thousand of births of living children.

The mortality of infants in the first year represents 37.24 per cent. of the total mortality; of those from one year until five years old, 20.49 per cent. of the same.

Among infectious diseases, only three have exerted a serious influence, viz., *diphtheria* with 7.37 per cent. (!) *measles* with 3.35 per cent., and *scarlet fever* with 2.47 per cent. of the total mortality. Death from *whooping-cough* shows 1.05 per cent. and from *typhoid fever* only 0.63 per cent. of the total number of the deceased. *Pulmonary phthisis* (with 11.47 per cent.) is not yet enlisted among infectious diseases. Death from *pneumonia* and *pleuritis* ensued in 6.79 per cent., and from *infant diarrhœa* in 8.27 per cent.

334 persons were killed by accident; 400 died by suicide; 7 were murdered, and 2 executed.

HONORARY DEGREES FROM THE UNIVERSITY OF EDINBURGH.—On the occasion of the Celebration of its Tercentenary Anniversary, the University of Edinburgh

has invited Prof. S. D. Gross, of Philadelphia; Dr. Fordyce Barker, of New York; and Dr. J. S. Billings, U. S. A., to accept the honorary degree of LL.D. Prof. Gross will be prevented from being present to receive the degree, but Drs. Barker and Billings will sail for Europe on April 2d.

BELLEVUE HOSPITAL MEDICAL COLLEGE COMMENCEMENT.—The Twenty-third Annual Commencement of this College was held in Steinway Hall, on Thursday evening, March 13th. The degree of M.D. was conferred upon one hundred and forty-nine graduates.

UNIVERSITY OF NASHVILLE, AND VANDERBILT UNIVERSITY.—The Commencement exercises of the Medical Departments of these institutions were held on February 25th. The degree of M.D. was conferred upon one hundred and twelve graduates.

UNIVERSITY OF MARYLAND; SCHOOL OF MEDICINE.—At the Seventy-seventh Annual Commencement of this School, held on March 14th, the degree of M.D. was conferred upon seventy-four graduates.

CENTRAL COLLEGE OF PHYSICIANS AND SURGEONS, INDIANAPOLIS.—At the Annual Commencement of this College, held on February 29th, the degree of M.D. was conferred upon twelve graduates.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF BUFFALO.—The thirty-eighth annual commencement of this institution was held on February 26. The degree of M.D. was conferred upon sixty-two graduates.

THE NATIONAL MEDICAL COLLEGE, WASHINGTON, D. C.—The sixty-second annual commencement exercises of the National Medical College (Medical Department of Columbia University, Washington, D. C.) was held on the 20th instant, at which time fourteen gentlemen received the degree of Doctor of Medicine, and thirteen others were reported to have passed a successful examination in the primary branches.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF GEORGETOWN.—A committee of three was appointed at a recent meeting of the Faculty of the Medical Department of the University of Georgetown, D. C., to report a plan for securing a suitable building for college purposes.

POLYCLINIC IN BALTIMORE.—The Baltimore Polyclinic and Post-Graduate Medical School has been recently organized, and is located at 112 Hanover Street. The Faculty consists of Drs. Alan P. Smith, J. Edward Michael, H. Clinton McSherry, B. Bernard Browne, Thomas A. Ashby, Samuel Theobald, Robert B. Morison, Randolph Winslow, T. Barton Brune, Wm. A. Moale, John W. Chambers, Thomas S. Latimer, and Ferdinand E. Chatard.

CONFIDENTIAL COMMUNICATIONS.—MR. WILLOUGHBY N. SMITH, of the Baltimore Bar, and Lecturer on Medical Jurisprudence in the College of Physicians and Surgeons, states that the following gives correct expression to the existing rule of law on this subject in the United States:

In the absence of any statutory provision to the contrary, it is well settled that a physician or surgeon may be *compelled* to disclose any communication made to him in professional confidence.—*Stephens's Digest of Evidence*, Art. 117.

The States which have enacted statutes changing this rule of the common law are the following:

Wisconsin, New York, Michigan, Iowa, Minnesota, Missouri, Ohio, Indiana, and Nebraska.

The statute of Wisconsin provides that "no person duly authorized to practise physic or surgery, shall be *compelled* to disclose any information which he may have acquired in attending any patient in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon."—*Wisconsin Revised Statutes*, Sec. 4075.

The statutes adopted in New York, Michigan, Minnesota, Missouri, Ohio, Indiana, and Nebraska, provide *either*, that a "person duly authorized to practise physic or surgery" shall not be "competent," or that he shall not be "*allowed*," to make the disclosure. *But* by the statutes of Iowa, Indiana, and Minnesota, such testimony "may be received with the consent of the patient" in all cases, and in Minnesota the prohibition, in the absence of such consent, is confined to civil cases: the "regular physician or surgeon" may be *compelled* in that State, in criminal cases, to disclose communications reposed in him in confidence by a patient while in actual attendance upon the patient in the capacity of medical adviser.—*Maryland Medical Journal*, March 1, 1884.

THE CHAIR OF BOTANY IN THE UNIVERSITY OF OXFORD.—The Professorship of Botany in the University of Oxford has been recently filled by the election of DR. ISAAC BAYLEY BALFOUR, Regius Professor of Botany in the University of Glasgow. Dr. Balfour is the son of the late Prof. Balfour, of Edinburgh.

INTERNATIONAL CONGRESS OF HYGIENE.—The fifth International Congress of Hygiene will meet at the Hague, August 21 to 27, 1884. The papers to be read will consider individual and general hygiene, sanitary, police, demiography, and medical statistics.

THIRTEENTH CONGRESS OF THE GERMAN SURGICAL SOCIETY.—The Thirteenth Kongress der deutschen Gesellschaft für Chirurgie will be held on the 16th to 19th of April, in Berlin. The following papers have been announced:

1. Dr. Zesas (Zürich), The Physiological Relation between the Spleen and the Thyroid Gland—The Treatment of Paraplegia in Spondylitis.
2. Dr. Cramer (Wiesbaden), Ferment-intoxication caused by a Blood-cyst.
3. Dr. Zabludowsky (Berlin), Massage.

CHOLERA.—Consular reports from Calcutta show twenty deaths from cholera at that place during the three weeks ending January 19, 1884.

YELLOW FEVER.—There were sixteen deaths from yellow fever at Havana during February, as against ten for the same month last year. Sanitary Inspector

Burgess continues disinfecting vessels loading and unloading at suspicious wharves. Reports from Rio state that there were thirteen deaths from yellow fever for the week ending January 26, 1884.

SOME VITAL STATISTICS OF ST. PETERSBURG.—The consul at St. Petersburg, in a consular report recently made, gives the following interesting statistical data. At the examination of recruits for the Russian army, during 1882, of 1000 candidates examined, 460 were rejected as being "too narrow-chested," 50 had pulmonary tuberculosis, and 10 from "poverty of blood." On the whole, 57.5 per cent. were rejected for physical disability. It was found that over 50 per cent. of the young men of St. Petersburg between twenty and twenty-two years of age were "weak and sickly." Of the population of the city, 2000 were affected with bodily infirmities: 771 were blind; 707 deaf or dumb, or both; 188 without arms, and 282 without legs. Blindness was twice as common among women as men, but the latter show a larger proportion of cripples. Of the 771 blind, it was congenital in 134, and of the 707 deaf and dumb, it was congenital in 409,

WAR-WOUNDS.—From a calculation based on the statistics furnished by the Crimean, the Dano-Prussian, the Austro-Prussian, and the Franco-Prussian wars, it would appear that the proportion of wounds received in different parts of the body is as follows: in the head, 14.65 per cent.; in the trunk, 18.17 per cent.; in the upper extremities, 30.19; in the lower extremities, 36.91. The statistics only apply to cases which have lived long enough to receive surgical treatment, and this will account for the very low percentage of wounds of the head; and the same remark applies in hardly less degree to wounds of the trunk.—*British Medical Journal*, February 16, 1884.

MEDICAL STUDENTS AT SWISS UNIVERSITIES.—The medical students of the Swiss universities are thus distributed, according to the *Lancet* of February 9, 1884: Basle, 108; Berne, 127 males and 28 females; Zurich, 184 males and 33 females; Geneva, 84 males and 7 females. Only five of the women are Swiss, all the others being Russian.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending March 8, 1884, indicate that influenza and dysentery have increased, and that rheumatism and consumption have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending March 8th, and since, at twelve places, scarlet fever at twenty-four places, and measles at seven places. One case of smallpox was reported in Bath Township, March 7th.

OBITUARY RECORD.—Died in Louisville, on March 12th, of neuralgia of the heart, LUNSFORD PITTS YANDELL, M.D. For several years he has been well known as the able editor of the *Louisville Medical News*.

A little more than six years ago his illustrious father, whose name he bore, passed away at the ripe age of seventy-three, and now the son, at least twenty years his junior, has gone over to the majority. Alas that a life thus incomplete, unfinished, should meet with such abrupt end! The father died in the evening after a day of marked usefulness and great honor, but the son, when noon was but little passed, in the meridian of his power, filling an important place as teacher, editor, and practitioner. To his widow and to his children—too young to understand the greatness of their loss—as well as to his brother, Dr. David W. Yandell, thus left in sad loneliness, the hearty sympathies of the profession are freely given.

——In Philadelphia, on March 17th, after a long illness, CASPAR MORRIS, M.D., aged 79 years. Dr. Morris was born in Philadelphia, in 1805. He received his degree in Medicine from the University of Pennsylvania in 1826. After a term of residency in the Pennsylvania Hospital, he went to India as surgeon of a ship. On his return he commenced practice in Philadelphia. He was for some time Lecturer on Diseases of Children in the Philadelphia Hospital, and on the Practice of Medicine in the Philadelphia Medical Institute; and he was the author of a volume of lectures on *Scarlet Fever*.

Dr. Morris was greatly esteemed for his gentleness and purity of character, as well as for his integrity and high sense of honor, and he was beloved by all who had the good fortune to know him as friend, physician, or citizen.

CORRIGENDUM.

DR. F. LANGE, of New York, requests us to state that some six months ago he resigned the position of Visiting Surgeon to Bellevue Hospital, and that, therefore, this appointment, which was appended to his name on page 255 in our issue of last week, does not now belong to him.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 11 TO MARCH 17, 1884.

BILLINGS, JOHN S., *Major and Surgeon.*—Granted leave of absence for one month with permission to go beyond the sea, to take effect April 1, 1884.—*Par. 6, S. O. 61, A. G. O.*, March 13, 1884.

BACHE, DALLAS, *Major and Surgeon.*—Leave of absence still further extended seven days.—*Par 1, S. O. 50, Headquarters Department of the East*, March 14, 1884.

HEIZMANN, CHARLES L., *Captain and Assistant Surgeon.*—Leave of absence extended three months.—*Par. 9, S. O. 57, A. G. O.*, March 8, 1884.

BLACK, CHARLES S., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort Concho, Texas.—*Par, 6, S. O. 30, Headquarters Department of Texas*, March 10. 1884.

KNEEDLER, WILLIAM L., *First Lieutenant and Assistant Surgeon.*—Assigned to temporary duty at Fort A. Lincoln, D. T.—*Par. 3, S. O. 26, Headquarters Department of Dakota*, March 8, 1884.

WALES, PHILIP G.—Appointed to be Assistant Surgeon with the rank of First Lieutenant, to date from February 7, 1884, vice Brewster, resigned.—*Mem. A. G. O.*, March 10, 1884.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIV. SATURDAY, MARCH 29, 1884. No. 13.

ORIGINAL LECTURES.

ON THE TREATMENT OF TYPHOID FEVER.

A Clinical Lecture.

BY PROF. DUJARDIN-BEAUMETZ,
OF PARIS.

(Continued from page 324.)

GENTLEMEN: I pass now to the proper medical treatment of the disease. I shall commence by reviewing the different kinds of treatment which have been in vogue; then we shall examine the approved medicinal measures, and the indications for their employment during the regular course of the fever and during the complications.

The different kinds of treatment of typhoid fever may be arranged in three principal groups. In the first, it is the fever alone which demands attention; in the second, it is the typhoid poison or miasm which is to be combated; in the third, it is empiricism which has directed the treatment. Hence we will examine successively the antipyretic treatment, the parasiticide treatment, and the empirical treatment.

We find in the antipyretic medication the same divisions as in the previous chapter, viz., we shall have to examine successively refrigerants and antipyretics. Refrigerant medication has found in the treatment of typhoid fever one of its principal applications, and we shall have to study here, cold baths, tepid baths, refrigerant apparatus, cold affusions, and lavements.

There is no question in therapeutics which has of late years provoked more vehement discussion than that of the application of cold baths to the treatment of typhoid fever; and this method to which Brand has justly given his name, for he it is who has furnished it with a rigorous and mathematical formulation, has been attacked and defended by resolute adversaries and determined partisans. I myself have taken part in this debate, and I am going to set forth as impartially as possible the advantages and disadvantages of this method.

Brand has thus formulated the treatment by cold baths. "You must administer baths of 64° to 68° F. of fifteen minutes' duration, from the fifth day of the fever; these must be repeated day and night every three hours, as long as the temperature of the rectum exceeds 102° F." In applying rigorously this method, so simple in appearance, Brand considered himself warranted in affirming, *that every case of typhoid fever treated regularly from the beginning by cold water, will be exempt from complications, and will get well.*

I shall not here enter into the details of Brand's method, details which pertain to the manner in which the patient should take the bath; and I refer you in this regard to the minute directions which Dr. Chapuis has given in his thesis (Paris, 1883), and which are founded on the technics in usage in the hospitals of Lyons. Lyons is, in fact, the only city in France where Brand's method is used in all its rigor, under the persevering efforts of Dr. Glenard, who, during his captivity at Stettin, had an opportunity to witness the results which Brand was obtaining. Dr. Glenard must congratulate himself on the success which has attended his persevering efforts, for we see almost complete unanimity in the hospitals of Lyons in reference to this refrigerant medication.

It is upon statistics that the partisans of this method base their arguments almost exclusively. Jaccoud, from a review of more than eighty thousand cases, arrived at an estimate that the average mortality in typhoid fever was 19.23 per cent. On the other hand, taking as a point of comparison the military hospitals, and in reckoning under a common title the continued fevers and typhoid fever, a mortality of fourteen per cent. is obtained. The application of Brand's method has caused a considerable fall in the percentage of deaths, since, out of thirty thousand cases treated by cold baths, there was a mortality of only nine per cent., and in the case of the military hospitals, of only seven per cent., or even less; and if we may rely upon the figures furnished by Abel, Physician in Chief of the Second Corps of the Prussian Army, in Pomerania, the mortality was reduced to nothing.

What is the real value of such captivating figures as these? You know already my opinion concerning statistics as applied to therapeutical results—I expressed them very clearly while on the treatment of pneumonia—I have not changed my mind, and I persist in considering statistics as an unreliable criterion of the results of our treatment, because, in order that this method may give positive results, it is essential that the individual cases which are collected and compared together shall be proper subjects for comparison, a thing which does not happen in pathology. Take, for example, typhoid fever. Do you believe that one typhoid patient is exactly like another typhoid patient? The age of the patient, the state of his vital forces, the relative severity of the epidemic, the period of the year, the nature of the locality even, have a great influence on this pathological aggregate, and modify its march and its fatality. It is here especially that we see the influence of what I have called the morbid genius of epidemics, where one sees epidemics relatively benign, succeed epidemics that were malignant; and according as you apply the same method of treatment to the first or to the second, you will have multiplied successes or almost constant failures.

The arguments, Gentlemen, which I adduce against statistics, I can in turn obtain from statistics themselves, and to the figures so convincing of Brand, of Glenard, of Strube, of Abel, etc., I need only oppose those of Schmidt of Erlangen, of Goltdammer of Berlin, of Boudet of Lyons, which show us that by rigorously employing the cold-bath medication the rate of mortality is considerably increased, approaching, as it does, a mean of nineteen per cent., and even exceeding this sometimes. I might even compare the other methods

of treatment with that of Brand, and show you also by figures that the refrigerant method has nothing to boast of.

I know well the objection which the partisans of the cold-bath cure make to these last statistics. They tell us that in these cases Brand's system of treatment was not carried out with mathematical precision, and according to his rules, and what is of more importance, it was not employed from the very commencement of the disease. My reply to this objection is more formal, and I assert that in the majority of cases, and outside of military practice—for which I make some reservation—the method of Brand is impracticable, both in our hospitals and in private practice. Not that I believe that we cannot in our hospitals and in our ordinary practice succeed in giving, despite the difficulties which attend them, cold baths day and night to our patients, but because it is necessary, according to Brand, to give these baths before the fifth day of the disease. Never do patients enter our hospitals at this period, and when they do enter, as we cannot be sure of our diagnosis till after the seventh day, it is not till this date that the cold-bath treatment can be commenced.

To this objection, Brand's partisans have replied categorically, and Bard has given the reply in this concise form: "In order that the method of Brand may have full efficacy, all fever patients should, without distinction, be subjected to the bath; *the bath will know its own.*" I do not know if the bath will "know its own" or not; but what I do know is, that we cannot, without danger, subject all our fever patients to a rigorous and severe method, and when we are ignorant of the cause even of the febrile process. Do you believe that the cold bath may not determine profound congestions? Do you believe that you can thus, without danger, force the circulating blood from the cutaneous surface to the central parts? My colleague and friend, Dumontpallier, has well argued that the slow and progressive refrigeration does not provoke visceral congestion; but to the clinical and experimental facts to which he appeals, I have opposed experiments and observations absolutely contrary to these views.[1] Brand's method, whatever one may say, is not free from danger, and not a few of the complications which supervene on the part of the lungs or intestines, in patients submitted to this treatment, may be attributed to it. As for the pulmonary liabilities, there is no doubt that as a result of the cold-bath medication congestions and inflammations of the lungs have arisen; and during the discussion which took place in 1876 and 1877, in the Society of the Hospitals, this fact greatly impressed the majority of those who took part in these debates.

I must say as much as regards intestinal hemorrhage; I believe that in certain cases the cold baths may favor these hemorrhages in patients who are predisposed. These complications, moreover, on the part of the lungs and intestines, are quite explicable from the very action of the cold baths which are employed.

Where do you suppose the blood goes to which circulates at the periphery when it is driven inwardly by the vaso-motor constrictive action of the cold bath and ice-water lotions? The blood cannot find refuge except in the internal organs, and this reflux cannot but favor congestion of the abdominal viscera. Soulier has made many experiments on animals to show that the vaso-motor constriction is produced almost at the same time at the surface and in the central organs; but I believe that these experiments, however careful they may have been, place the animal in quite different circumstances from those of our typhoid patients.

To sum up, I consider the exclusive method of Brand, and the rigorous and mathematical rules which he has formulated, as deserving to be banished from the treatment of typhoid fever, and for this reason especially—because it requires, in order to derive from it all the results which it promises, to be applied before the diagnosis can be certain; for, employed later, this system only gives—according to the acknowledgment of its most zealous partisans—results comparable with those of other therapeutic methods, and with greater danger to the patients. You will see, in fact, that we have for the treatment of certain manifestations of abdominal typhus, hydro-therapeutic means much less dangerous and quite as powerful—not, perhaps, from the point of view of hyperyrexia, but from that of the other symptoms of typhoid fever; for, in my opinion, the advocates of the refrigerant medication have committed an error in vociferating, "The hyperpyrexia! behold the enemy!" The hyperpyrexia, as Peter has well said, does not constitute all the danger of the disease, of which it is only one of the manifestations.

Tepid baths are, in my judgment, much more applicable to ordinary cases of this disease, and I pointed out several years ago the advantages which might be derived from these baths, which, as my hospital experience has shown, have an antipyretic action much less marked than that of cold baths, but are absolutely safe. They allay the excitement of the nervous system, diminish the sensation of burning heat, and enable us to maintain perfect cleanliness in our patients.

There are two ways of administering tepid baths. Some, as Ziemssen, Schutzenberger, and Laure, of Lyons, employ baths of decreasing temperature, and from 95° F. they lower the temperature of the water, in the course of ten minutes, to 77° F. Others, and I am of their number, keep the warm bath at a constant temperature of five degrees below that of the patient, to wit, varying from 93° F. to 98° F. These baths should be of much longer duration than the cold baths, and without going as far as Reiss, who keeps the patient in them almost all the time, I am of the opinion, relying especially on the experiments of Thery, that it is sufficient to prolong them from twenty to thirty minutes. These baths are repeated once or twice a day, the attendant having care to sustain the forces of the patient by giving him, during the bath, wine and meat broths. I have always seen, under the influence of these tepid baths, typhoid patients with hyperpyrexia and delirium manifest a notable amelioration of the symptoms, become calm, and obtain quiet sleep.

I shall say little about the employment of refrigerant apparatus, not because I doubt their value—on the contrary, they are the only means which enable us to apply, systematically and rigorously, the refrigerant method—but because I have had no personal experience with regard to them. They are, in fact, quite

[1] Dumontpallier, on the Refrigerant Method. Gaz. des Hôp., March 13, 1883. Dujardin-Beaumetz on Refrigerant Medication, Un. Méd., 1883.

complicated and costly, and this is the reason why no one but their inventor, my colleague, Dumontpallier, has applied them in practice. If we refer to the conclusions which he has recently formulated, these apparatus have given him good results. We find means much more easy of application in cold affusions, lotions, and the wet pack, which can be used by anybody.

Affusions of cold water, or rather of sea-water, which was Currie's treatment of fevers, are no longer in use, and the cold lotions of which I have already spoken are far preferable. These lotions of cold water are decidedly antithermic in their action, as no one who has watched their effect can have failed to observe; the temperature falls appreciably under their use, especially if they are repeated several times a day. This heat-reducing power is, I well know, limited, and in certain grave cases of ileo-typhus these lotions do not suffice to bring down the temperature, and we must have recourse to more active means. I believe the refrigerant action of these lotions to be a secondary effect, the principal and dominant action being that which they exert on the vaso-motor functions of the cutaneous capillary network, functions so profoundly disturbed in typhoid fever, and which tend to become restored under the influence of these cold lavations or spongings.

This vaso-motor and revulsive action is much more energetic when the wet pack is used. The method is very simple; the patient, in a state of nudity, is wrapped from head to foot in a sheet or blanket wrung out of ice-cold water. It is well, as a preliminary step, to have a rubber blanket spread upon a mattress; over this you place the wet sheet, in which you wrap your patient. Liebermeister advises that this envelopment should be continued for ten minutes; for my part, I prefer a shorter duration of a minute or so, after which the patient is taken from the wet sheet and removed to his bed. If I prefer wet wrappings of short duration, to the practice of Liebermeister, it is because I do not wish to obtain refrigeration from these envelopments, but only a *regulative modification* of the nervous system, and this effect will be the more marked, the shorter the duration of the cold application. This is, Gentlemen, one of our most powerful modes of treatment in cases of typhoid fever of ataxic and adynamic character, and you will derive great benefit from it. Foltz has recently added cold lavements to the refrigerant medication. These lavements of water at 50° F., lower the temperature of patients—in a feeble manner it is true—but still appreciably, and this is a fact worthy of being remembered. So whenever you have occasion to give enemata to typhoid patients, see to it that the water which you use is cold.

Having finished refrigerants, I pass now, in accordance with the order which I adopted in the previous lecture, to bloodletting.

Very much in use in the treatment of fevers at the commencement of this century, and before we had precise notions respecting the nature of typhoid fever, bloodletting was still practised at a later date in this disease by Louis and Chomel, and especially by Bouillaud, who thought to *jugulate* the disease by applying to it the formula of "bleeding upon bleeding" (*coup sur coup*). To-day the practice of bloodletting, local or general, is completely abandoned; and, nevertheless, whenever nature herself proceeds to the letting of blood, and when these losses do not exceed certain limits, we see the temperature fall, and symptoms of the greatest gravity abate; so that, in a great many cases, intestinal hemorrhages are an element of prognosis rather favorable than otherwise. The two clinical charts which I here show you, indicate well the antithermal action of these hemorrhages. It is true that you sometimes purchase this amelioration by a long and painful convalescence; however this may be, we note the fact without venturing to authorize the interference of the physician in order to produce artificially, in typhoid patients, loss of blood.

I now come to the study of medicaments which act on the fever by the intermediation of the nervous system, and we shall examine successively the treatment of typhoid fever by digitalis, aconite, veratrum viride, and sulphate of quinine.

It is Hirtz who, in our country, has defended with the most ardor the treatment of this fever with digitalis, a practice already adopted since 1862 by Wunderlich. Digitalis is given in the form of infusion, and fifteen to thirty grains of the powdered leaves are steeped in a gill of water, all of which is administered daily in divided doses. These doses, continued for three days, cause a notable diminution of the pulse and temperature, but despite this powerful antithermic effect, which is not denied by any observer, this kind of treatment is not much in favor. One fears, with reason, the action of digitalis on the heart, which is so often affected, as we have seen, with symptomatic myositis, as well as the emeto-cathartic effects which digitalis determines when given in such large doses.

I shall not take up your time with the treatment by aconite recommended by Lavasseur and Deshayes, of Rouen, nor with that of veratrum viride employed by Hirtz, Vogt, and Liebermeister, their trials not having been since repeated; at the same time remarking, *à propos* of the first of these medicines, that if you wish to experiment with aconite you should use the tincture of the root and not that of the leaves, the latter having no medicinal virtue, and I pass now to the study of a kind of treatment which has numerous partisans at home as well as abroad. I refer to the medication of typhoid fever by quinine.

Broqua, of Mirande, in 1840, communicated to the Academy of Medicine the good results which he had obtained in the treatment of typhoid fever with large doses of sulphate of quinine, and we have seen successively Chappotain, of St. Laurent, Pereira, Boucher, of Ville Jossy, Blache, Briquet, and Monneret boast of the effects of this medication. Monneret went the furthest in this direction, for endeavoring to substitute for poisoning by the typhogenous miasm the toxic effect of quinine, he was in the habit of administering as much as seventy-five grains a day of this medicine. Such bold experiments were sometimes followed by bad results; therefore this medication was abandoned, at least in our country. Vogt, in 1858, and Wachsmuth, in 1863, and, lastly, Liebermeister, in 1867, repeated these first trials, but this time they applied to the study of the effects of the medicament the use of the thermometer, and gave precise indications of the administration of the medicine. This treatment was rapidly adopted in foreign lands and in France, and we see Lindwurm, of Munich, Œffner, Larsen, of Copenhagen,

Pawer, Kaulich, Jaccoud, Germain Sée, Herard, Barthez, and others, put in practice this medication.

It is the sulphate of quinine that is most often employed; yet in Germany use is made of the hydrochlorate, and in France Jaccoud prescribes the bibromhydrate of quinine. These salts are administered in solution, or oftener in capsules; the pill form should be discarded, for it not seldom happens that on account of the state of the digestive tube, these pills pass through the intestinal canal unaltered. But the capital point, and it is this on which Liebermeister has insisted, is to give large doses; for example, you should make your patient take eight grains every fifteen minutes till half a drachm has been reached. Liebermeister often exceeds this quantity, and continues giving the small doses every quarter of an hour till from forty to sixty grains are administered, but in this country we generally stop at half a drachm.

The period of administration of these massive doses has also a great importance. Liebermeister counsels to give the quinine between five and seven o'clock in the evening; Germain Sée prefers the morning; Jaccoud, with good reason, says that you should give it in the morning or evening, according to the effect which you desire to obtain. Do you wish, for instance, to procure a lowering of the evening temperature? give your quinine in the morning; Do you wish to obtain a matinal fall? give it in the evening. Leibermeister and Kaulich give one large full dose on one day only, and do not repeat the dose unless the temperature takes on again an ascending march. Jaccoud gives his salt of quinine in decreasing doses for three days. Sée administers it without interruption. I believe that the method by interruption has great advantages over the continuous employ of the medicament, and you ought to be guided in this regard by the thermometric curve.

Employed after this fashion, sulphate of quinine produces in typhoid patients a very pronounced depression of the pulse and temperature, which lasts often for two days, and when the thermal curve rises it does not attain as high a point as before the exhibition of the quinine. But this antipyretic action, obtained with such large doses of quinine, has certain disadvantages. In giving to the patient thirty, and often forty or more grains of quinine, you are likely to overstep the therapeutic effect, and obtain the toxic action on the brain and on the heart. Germain Sée and Rochefontaine affirm that this cardiac action is of a tonic kind, but Laborde, with much reason, maintains that it is dangerous in hearts with degenerated muscular fibre, and you know that the latter is a very common complication in the infectious diseases. Moreover (and this is an argument which I adduced in the last discussion at the Academy), the typhoid patient is a bad subject for treatment, not only because absorption of medicines is difficult in consequence of the unhealthy state of the digestive tube and the lymphatic vessels, which originate there, but also because the functions of the kidney and the liver are notably compromised. In a former course of lectures I showed you the capital importance of the liver and of the kidney from the point of view of the action of medicines, and from all these considerations you see how easy it is, when drugging your typhoid patients, to exceed the therapeutic and obtain the toxic action of your remedial agents.

You ought always, Gentlemen, to have these facts in mind when prescribing active medicines in large doses to your patients in this fever. And while recognizing the benefits of quinine medication, I believe that it is best to be very prudent in the administration of this alkaloid, and never to exceed the dose of thirty grains a day, and always to have care not to give this medicament continuously. Therefore, I much prefer, as an antipyretic, salicylic acid to quinine, because one obtains antithermic effects quite as powerful with the former, and in doses which entail less danger.

It was Riess who first, in 1875, applied salicylic acid to the treatment of typhoid fever; and since this first trial, Schroeder, Nathan, Fischer, Ewald, Goldtammer, Bælz, in foreign lands, and in France, Garcin, Noel Gueneau de Mussy, Jaccoud, Oulmont, Hallopeau, Caussidon, and Rabeau, and, especially, Prof. Vulpian, have shown us the advantages which may be derived from salicylic acid in this disease. Salicylate of soda, salicylate of bismuth, and salicylic acid have severally been employed. Salicylate of soda is preferred by the greater part of German physicians, as producing less irritation of the alimentary canal than salicylic acid, and as being quite as good an antipyretic. I do not hold this opinion, and believe with Prof. Vulpian, supported as is this belief by numerous cases occurring in my hospital practice, that salicylic acid possesses—in equal dose—an antifebrile action far superior to that of salicylate of soda; and I am as much a partisan of salicylic acid in the treatment of this fever as I am of the salicylates when it is a question of rheumatic fever. Salicylate of bismuth, which I was the first, I believe, to employ in therapeutics (not, indeed, in typhoid fever, but to combat the fetid diarrhœa of infancy), has been utilized by Vulpian in the treatment of dothinenteritis. Guided by the idea—very just, indeed—that typhogenous virus develops especially in the last portion of the small intestine, Vulpian thought of this medicament, which seemed to him likely to reach without any alteration the diseased places in the intestine, and there combat, *in situ*, the development of the infectious organisms. But the results have not met his expectations; salicylate of bismuth has, indeed, lowered the temperature, but it has had no influence on the march of the disease. So, despite the more satisfying results which Desplats has obtained, this medication has not found much favor.

Salicylic acid should be administered in capsules, and in a dose not exceeding sixty grains, for more than this determines, especially in females, cerebral excitation, buzzings in the ears, and gastro-intestinal irritation. I, moreover, am always careful to give at the same time a little milk to mitigate the symptoms of the latter, and when I come to speak more particularly of the details of management of this fever, I shall tell you the rules which I follow in giving salicylic acid. In doses of from half a drachm to a drachm it lowers the temperature two or three degrees without much influencing the pulse. By not exceeding this quantity of the medicament, I have never observed any cardiac or nervous symptoms to follow. It is not so with the next antipyretic of which I shall speak, viz., carbolic acid.

Desplats, of Lille, was the first to found the *phenic medication* of typhoid fever; the trials made previously by Pecholier, Tempesto, and Skinner were not

successful, by reason of the small doses given. Desplats gives phenic acid in lavements containing twenty to thirty grains, and gives three or four of these a day; these lavements should be retained so that the medicament may be absorbed. Phenic acid has a considerable antipyretic action, and for my part I have seen doses of less than half a drachm administered in lavements, produce a fall in the fever of nearly five degrees. Such an antipyretic action is not, however, produced without danger; it is, in fact, accompanied with profuse sweats, pallor of the integument, and often an alarming state of collapse.

Last year (in 1882), I often had recourse to carbolic lavements, and frequently observed pulmonary congestions in patients thus treated; in calling to mind the toxic effects noted in animals poisoned by phenic acid, where these pulmonary congestions are the rule, I attributed to my medication a certain part in the production of these thoracic complications, and discontinued the employ of these phenic lavements. Since then, at the Medical Society of the Hospitals, at the time of the discussion which followed the report of Ferrand on the method of Desplats, several of our colleagues, and in particular Siredey and Dreyfus Brissac, mentioned similar facts; therefore, Gentlemen, while recognizing the powerful antipyretic action of phenic acid, this medication must be considered as dangerous, and when you have recourse to it you cannot exercise too great care and watchfulness. For my part, I think it should be abandoned altogether.

Resorcin has been little used in typhoid fever. You will see, when I come to speak of intermittent fever, that it has been used to advantage in this fever, but although I have made many attempts to introduce this substance into the therapeutics of our country, I have not obtained any very positive effects from it in ileo-typhus. As for kairine, I am not aware of any definite results which have been obtained from it in this disease.

(To be concluded.)

ORIGINAL ARTICLES.

THE TREATMENT OF FRACTURES OF THE PATELLA BY THE PLASTER-OF-PARIS SPLINT.[1]

By JAMES L. LITTLE, M.D.,

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In presenting this subject to the Society this evening, I wish to describe the method of treating simple transverse fractures of the patella with plaster of Paris, which I have used since 1863, and which has never before been described. I am also anxious that it shall serve to draw out a full discussion upon the treatment of this important injury.

The plaster-of-Paris *bandage* has been more frequently used, and the results have not been sufficiently satisfactory to prevent Hamilton from condemning it in these words: "Plaster of Paris is, of all the forms of immovable dressings, the worst, because it is the heaviest; but of them all it must be said that they are necessarily cumbrous as a form of portative apparatus; they are, to some extent, dangerous, especially in the hands of inexperienced surgeons; they are inefficient as a means of approximating the fragments; they actually serve but one single purpose, namely, to keep the limbs straight; and this they do too effectually in many cases, causing an unnecessary degree of passive ankylosis. The limb can be maintained in a straight position by a much simpler and lighter dressing than a plaster-of-Paris splint, and by means which permit it to be daily examined and the condition of the fragments noted and corrected, and which will allow slight passive motion occasionally to the knee-joint, a practice which has been found in my experience perfectly safe, and useful in some measure, as far as the ankylosis is concerned. In short, to apply the plaster of Paris, and permit the patient to go about on crutches, as is generally acknowledged by its advocates, is to abandon practically every acknowledged indication of treatment, except straighening the limb and securing immobility at the knee-joint."[1]

This criticism, from so high an authority, has evidently been drawn out by his observation on the treatment of the fracture in question by the plaster-of-Paris *bandage*. It will, perhaps, be best for me to state at the outset, in order to avoid a misunderstanding, that I always make a distinction between the plaster-of-Paris *bandage* and the plaster-of-Paris *splint*; two entirely different methods of using this material. The method which I propose to describe is by the use of the plaster-of-Paris splint, which was first introduced by me in 1861, and first applied to a fracture of the patella, in 1863, in a patient of the late Dr. Tucker, of this city, and which I have used in all the cases that have come under my care in St. Luke's and St. Vincent's Hospitals, as well as in my private practice.

Immediately after the receipt of the injury, I elevate the limb slightly, and place it on a pillow, or a single inclined plane, and wait until the swelling and inflammatory action which follow have subsided. The limb is placed in this position simply for the comfort of the patient, and not for the purpose of relaxing the quadriceps extensor muscle, and thus preventing the separation of the fragments, which was formerly considered necessary. Although I have often attempted, I have never been able, to demonstrate that it made any appreciable difference in regard to the separation of the fragments whether the limb was in a straight position or the thigh flexed on the pelvis.

Sometimes, when the effusion into the synovial cavity is great, I apply pressure as soon as the patient is able to bear it, by means of a bandage. When the swelling has subsided, which takes from five days to a week, the following dressing is applied: A posterior splint is made of two thicknesses of bleached Canton flannel, strengthened in the middle, under the knee, by two extra layers; this

[1] Read before the New York Surgical Society, March 11, 1884.

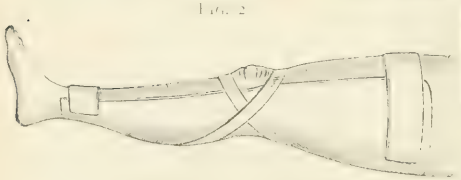
[1] A Practical Treatise on Fractures and Dislocations, by Frank H. Hamilton, 1880, p. 522.

is made long enough to reach from a little above the ankle to above the middle of the thigh, and wide enough to cover two-thirds of the circumference of the limb above and below the joint, but at the joint it should only just cover the condyles of the femur. Two pieces of Canton flannel, of from two and a half to three inches in width, double thickness, one long enough nearly to encircle the limb at the ankle, the other to encircle it at the upper third of the thigh, are prepared at the same time. The pieces designed for the posterior splint are then thoroughly saturated in a mixture of plaster of Paris and water, taking care that the mixture is not too thick,[1] and then smoothed out upon a board with the hand, and applied smoothly to the limb. Then the two bands are prepared in the same way and applied around the upper and lower extremities to hold it in position. A dry roller bandage is then firmly applied over all, and the plaster allowed to set.

As soon as this is accomplished the bandage is removed, and we have a firm posterior splint, secured above and below by transverse bands.[2] Two other strips, of a double thickness of Canton flannel an inch wide, and long enough to overlap on the posterior surface of the splint, are saturated in a fresh mixture of plaster of Paris and then tightly applied above and below the patella, while the fragments are held in position by an assistant, in the same manner as adhesive straps are used for coaptation in this fracture. A dry roller bandage is then rapidly applied with the figure-of-eight turns over the strips. The surgeon then, with thumb and finger of each hand over these coaptation bands, forces the fragments into close approximation,[3] and holds them

FIG. 1.

FIG. 2.



there until the plaster has set (Fig. 1). The bandage is then removed and a fresh one applied over the whole length of the limb.[1] The dressing is then complete. Fig. 2 shows the splint with the bandage removed.

It is a good plan for the surgeon, before applying the coaptation bands, to see that the fragments can be easily approximated In a number of cases I have found some difficulty in keeping the fragments in the same plane, or in preventing them from tilting, there being a tendency for one to rise above the other. This can be overcome by making pressure with the fingers over the line of fracture while waiting for the bands to harden.

This dressing differs essentially from all others, in that the fragments are adjusted by the hands of the surgeon, and the "setting" of the plaster keeps them in the exact position in which they were held.

With this dressing the patient is not compelled to keep his bed, but may sit up or go about on crutches with but little inconvenience.

This apparatus, like all plaster-of-Paris splints, should be applied directly against the skin, care being taken, however, to remove the hair, or else smear the limb with vaseline or oil.

The condition of the fragments can now be examined at any time by simply removing the bandage, and, in case any separation has taken place in consequence of the shrinkage of the limb, it can be corrected by removing the coaptation bands and applying new ones. Care should be taken, if this becomes necessary, which is seldom the case, to moisten the posterior splint in order to insure the adherence of the new pieces.

This overcomes one of the objections urged by Dr. Hamilton—the inefficiency of this dressing as a means of approximating the fragments. Another objection which he makes, in regard to the weight of the splint, is not at all applicable, as patients have never complained of this, and I doubt very much if it weighs any more than the apparatus he recommends.

Pressure sores have never been produced in my experience, nor have the patients ever complained of any pain caused by undue tightness of the dressing. In fact, constriction of the limb by the splint, bands, or bandages, so as to interfere with the circulation, cannot occur, even in inexperienced hands. In this respect it is safer than the plaster-of-Paris bandage which Hamilton so justly condemns.

In order to prevent a rough edge at the upper and lower extremities of the splint, it is advisable to fold them over about half an inch, thus bringing a perfectly smooth edge in contact with the soft parts.

This dressing should be left on for from six to eight weeks. The majority of patients rarely have any appreciable separation of the fragments at the end of the treatment, but as the union is generally ligamentous, a certain amount of separation will take place in time, as in all cases in which there is not bony union.

A case that I treated ten years ago, by this method, came under my notice again a few weeks

[1] Superfine or dental plaster should be obtained. The mixture should be about the consistency of cream.

[2] Sometimes I apply a third band between the knee and the lower one.

[3] The lower coaptation band holds the lower fragment fixed, and at the same time enables the surgeon to make counter-pressure while he forces the upper fragment in position.

[1] I have sometimes applied a plaster-of-Paris bandage over the splint. This makes a very strong dressing, but it prevents the inspection of the fragments during the course of the treatment, for this reason I prefer the dry muslin bandage.

since; the fragments, which after the treatment were almost in direct contact, I found had separated only a little more than half an inch.

Two cases treated by this apparatus, at St. Vincent's Hospital, resulted in bony union. The first case, a man, about forty years of age, was treated for a transverse fracture of the right patella.

After the apparatus was removed no separation or motion of the fragments could be detected. He remained in the hospital about three months. Six weeks after he left, he was brought back with a severe injury of the head, from which he died. The patella was removed, and was found to have united by bone (Fig. 3). The specimen which I show the

FIG. 3.

Society has been carefully examined, by section, by Prof. W. H. Welch, of Bellevue Hospital Medical College, and he states that it is true bony union (Fig. 4). The line of fracture is slightly oblique,

FIG. 4.

from above downwards and outwards. The lower fragment is somewhat tilted, and overlaps the upper a little; it is also displaced outwards one-quarter of an inch.

This interesting specimen belongs to the late Prof. James R. Wood's collection in the Bellevue Hospital Museum.

In the second case, treated by Prof. F. S. Dennis, although the patient was eighty-six years of age, no separation or movement of the fragments could be detected when he left the hospital.

In comparing this method with the one of wiring the patella in simple fractures, under antiseptic precautions, which has lately come into vogue, I am inclined to give the preference to the one just described, or to any other form of dressing which results in close ligamentous union. The patient is not submitted to a surgical operation which may endanger his life or the usefulness of his knee-joint, for, with the utmost care in antiseptic measures, there is still the possibility of serious complications. I think all surgeons will agree, that a moderate amount of separation of the fragments by a ligamentous band, does not in any way interfere with the usefulness of the limb. Hamilton says "that if the ligamentous band is not more than an inch in length, the use of the limb is not impaired." In a case which I presented at one of the meetings of the Society about two years ago, a patient, aged twenty-two, broke his patella transversely below its middle. He was treated by me in St. Luke's Hospital, and was discharged with a ligamentous union of less than half an inch. Six months after, he slipped in walking and fractured the same patella about half an inch above the first fracture; this also united by ligament. In this case the ligament proved itself stronger than the original bone.

If, then, ligamentous union of a moderate length does not impair the usefulness of the limb and is as strong, if not stronger, than the original bone, why should we submit the patient to any serious danger, in order to obtain bony union, which at the best is of questionable utility?

While bony union, obtained by wiring, may be the goal for which the idealist strives, I question whether it can ever be conscientiously adopted by conservative surgeons.

THE TREATMENT OF TYPHOID FEVER.[1]

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IN rising to open the discussion of the treatment of typhoid fever one cannot help being impressed with the fact that he is approaching a subject the importance of which is not surpassed in the entire range of therapeutics. Very few diseases require such unremitting watchfulness or as careful and discriminating judgment, on the part of the practitioner, as the subject of our discussion this evening, and in very few diseases are we able to see the direct effect of therapeutics with more precision and certainty.

Inasmuch as I am to be followed this evening by men whose researches and experience, in relation to this disease, have already made them known throughout the medical world, men whose remarks will give dignity and weight to the proceedings of this Society long after the cause of its existence shall have been forgotten, I will occupy a small portion of your time only, and will direct my remarks chiefly to some of the salient points in the treatment of the more important symptoms of typhoid fever, leaving the elaboration of many

[1] Read before the New York County Medical Association on March 17, 1884.

details to the subsequent discussion, to which, I feel sure, you are all looking forward with eagerness.

It seems scarcely pertinent to allude to the prophylactic treatment, inasmuch as its nature is so readily deducible from the paper to which we listened with such interest at our last meeting.

I shall not occupy your time with any allusions to the subjects of sanitary plumbing and drainage, consideration of them having been so recently brought to your notice. As physicians, it becomes our imperative duty to prevent drains from becoming infected, by properly disinfecting all the discharges from typhoid fever patients immediately upon their being passed into the bedpan. Perhaps the best disinfectant to use, considering its cheapness and efficiency, is corrosive sublimate. It possesses the advantages of being cheaper and more effective than carbolic acid for this purpose, and it does not stain the bedclothes as does the solution of sulphate of iron. We know that the stools of typhoid fever patients are not infective immediately upon their being passed, but observations are still wanting to determine the exact time at which they become so. It is known that the disease has been spread by stools that have been kept twelve hours for the inspection of the attending physician and then promptly disinfected, but more definite information than this is still lacking, so far as I am aware. The length of time that the stools retain their efficiency as bearers of the contagion seems to be practically indefinite. Two years after the burial of fever stools in a dung-heap several men engaged in removing the dung-heap sickened with the disease. The danger of infecting drains in the post-mortem room is one not commonly considered, but it is certainly important to disinfect the intestinal contents upon the autopsy table before allowing them to reach the sewer. I am not aware that the disease has ever been spread by neglect to observe this precaution, but it seems fair to suppose that it might thus be spread.

After the disease has been contracted our first precaution should be to put the patient to bed at once, and keep him continuously there until convalescence has been fully established. The evil effects of a neglect of this measure are seen with unfortunate frequency in our hospitals, it being a matter of common observation with hospital physicians that cases coming under treatment late in the disease are more liable to exhibit aggravated conditions of meteorism, gurgling, tenderness, diarrhœa, bronchitis, pneumonia, buboes, boils, as well as increased tendency to relapse, to prolonged duration and all the severe complications, and to death, than are those who come under medical care early in the disease. These facts are well shown by an analysis of cases in the reports of St. Bartholomew's Hospital for the year 1882.

The hygiene of the bedchamber next claims our attention. This should, if possible, be large and well ventilated, and should contain two beds that may both be utilized by the patient. The temperature of the room should never be high if it can be avoided, and the patient's covering should be as light as is consistent with his comfort. High temperature of the atmosphere has been shown to aggravate a fever patient's condition, and we see higher degrees of fever and greater mortality in this disease during the summer than at other seasons. All external irritation should be avoided, such as strong light, noises, conversation, and all mental and physical excitement. The service must be quiet and unobtrusive. The patients must never be needlessly opposed, but must be humored in little things, so far as they are not inconsistent with our treatment. A delirious patient must not be forcibly restrained, but must be soothed and quieted in such a manner as every nurse with tact and discrimination understands. I well remember a patient whom I left one day in excellent general condition, but mildly delirious, during the second week of his disease. At night his delirium increased, and the house physician—one of the most efficient house physicians that I have ever had the good fortune to meet—found it necessary to have him restrained by attendants. The services of these attendants were more forcible than efficient, and after midnight in an encounter with them he succeeded in getting out of bed and fell, striking his head rather forcibly upon a hard floor. This seemed to render him furiously maniacal, and he died, exhausted, before daylight. A little more morphine, a large dose of brandy, a little tact, judgment, and good feeling on the part of the attendants might have saved this man's life. In a disease like this, in which trifles seem so often to turn the scale, one cannot be too careful to seize every possible advantage, however trifling, and turn it to good account.

Fever patients generally submit willingly to the taking of their temperature, and I have rarely encountered any objection to taking the temperature in the rectum, which is certainly the best situation for the purpose. English writers seem to have found it difficult or impossible to do this, strange as it may seem to us, and they write in an envious strain of the advantages possessed by continental observers in this respect.

Liebermeister and Friedreich have used calomel in the first week of the disease in doses of seven and a half grains, three or four times a day. They assert that the diarrhœa, which at first is increased by calomel, soon becomes less than before, and that this method of treatment, if undertaken early and systematically, seems to control the duration of the disease, lower the temperature, and lessen the mortality. Possibly this drug may remove some of the infecting material from the alimentary canal, and thus limit its power of producing local inflammatory changes. It is also asserted on high authority that the administration of three or four drops in a glass of water of a solution made up of one part of iodine, two parts of iodide of potash, and ten parts of water, if long kept up will lessen the mortality without marked influence on special symptoms. I have no personal experience with these methods of treatment, but inasmuch as they come to us from authority which we all must recognize, it seems right that they should be given a thorough trial. Doubtless, those who are to follow me this evening can bear testimony as regards this treatment.

The appetite is usually much impaired, and there can be no doubt that the powers of digestion and assimilation are markedly interfered with; but Pavy and Hoppe-Seyler have shown that an active digestive fluid can be prepared from the stomachs of animals in a state of fever. The digestive power varies in fever as it does in health in different individuals, and although some patients may be able to digest beefsteaks—as was the case with a patient of Heubner's, to whom he administered them throughout a severe attack of typhoid fever—there is little doubt that the average patients are unable to do so. Much of the inability to take food in fever is due to the partial or complete arrest of the secretion of saliva and the consequent dryness of the mouth. I have seen a patient's general condition improved by keeping his lips well smeared with vaseline and his mouth frequently moistened by teaspoonful doses of cold water. We should be careful to give an adequate amount of water throughout the disease, and, of course, the desire of patients is, in some conditions, wholly unsafe as a guide in reference to the quantity.

Experience teaches that our main reliance during the pyretic period must be upon milk, and we know that an adult patient will usually do fairly well if he is able to retain and assimilate about two quarts of it a day. Too much reliance cannot be placed upon the stimulating effects of the salts and extractive matters of meat-broths, as seen in their occasional administration. Their effects are of value upon the heart and central nervous system, as are also, in some cases, coffee, tea, and barley-water; but we must look to milk, peptonized or not, as our chief or only food. Rectal alimentation must occasionally be resorted to if the stomach prove irritable; but it must be our constant endeavor to avoid this complication by administering the food in small quantities, and not oftener than once in two or three hours. Two years ago it was my privilege to watch a case of typhoid fever through its entire course and a subsequent relapse, in which milk was not administered at all; in fact, in which substantially no treatment was resorted to. The patient was a pampered child of wealthy parents, always indulged and always self-willed, in whom the various traits developed by utter lack of training, seemed exaggerated by the removal of the slight inhibitory influences to which he was pleased to subject them in health. He would do nothing that it did not please him to do at the moment, nor would he allow anything to be done for him that did not suit his fancy. He resisted all efforts at reduction of his temperature by cold affusions, all efforts at rectal alimentation, and absolutely refused to take anything in the way of food, except beef-juice and lager beer. Occasionally, in my absence, his mother gave him bits of cracker and fruit. On one occasion he prevailed upon her to give him a large banana, which she told me he ate with relish. His struggles against sponging were such that it seemed to me injudicious to insist upon it, and I had the satisfaction, for the first time in my life, of watching a prolonged and well-marked case of typhoid fever substantially untreated through its entire course. His temperature remained between 102.5° and 104.5° for nearly two weeks, but he finally convalesced and made a complete, though tardy, recovery.

As to the use of spirits, we find the teaching of writers widely different. My own plan is to administer it early in the disease only to drunkards or those always habituated to it in large amounts. My belief is that many cases never need alcohol at all; but that a majority are benefited by it in the latter part of the second and third weeks, and often later. It seems to me that the tendency in New York is to begin the administration of alcohol too early, and to measure its amount rather by the actual quantity given than by the effect produced. The pulse and tongue, and the nervous symptoms should be our guides, and of these chiefly the pulse. If the heart's action become feeble and remain so, alcohol is indicated, and the amount to be given can only be measured by the effect produced. In some cases a few ounces of whiskey, in others nearly a quart in the twenty-four hours may be required. Digitalis is often of use under these circumstances.

As the disease subsides, we are compelled to determine exactly when a return to solid food may be allowed; and to ascertain how to answer this question, we must ask ourselves another, namely, What dangers do we encounter by administering solid food during the fever and immediately after its cessation? This depends much upon the character of the food employed. During the progress of the fever, stomach digestion is certainly much interfered with. It has been shown that in dogs affected with septicæmic fever the digestive fluid obtained from the stomach was far inferior in its powers of digestion to that of healthy animals; but that if hydrochloric acid were added, then the digestive powers were equal to those of health. This corresponds with a clinical observation that was made in one of Prof. Kussmaul's wards while I was a student of medicine in the University of Strassburg. The stomach of a man who was under treatment for chronic gastritis was being daily washed out, and the washings were carefully examined in the laboratory of Hoppe-Seyler from day to day. While under treatment of this kind, the man contracted typhoid fever in the hospital, and immediately on the temperature rising above the normal, all trace of free acid disappeared from the washings of his stomach. These experimental facts coincide with the results of clinical experience, and teach us that acids are often indicated for fever patients, and that purely albuminous food is not well borne in fever; but are there any facts which justify us in withholding such food after the temperature has become normal? We have been accustomed to hear that an early return to solid food is liable to produce a relapse; and this has been taken up and repeated by writer after writer, until at present many of us accept it without question. So far as I can learn, there is no clinical evidence in support of such a view. The statistics of a recent epidemic in London, as shown by the cases treated at St. Bartholomew's Hospital, bear strong testimony against this view.

There can be no question that solid food, passing undigested over the ulcers before they have lost

their sloughs and begun to granulate, has produced dangerous complications, such as perforation and hemorrhage; but after the base of the ulceration is covered by granulations, even this danger is removed. I am well aware of the fact that there are no signs upon which we can rely to indicate the depth, size, or general condition of the ulcers. Muscular twitching, of which so much has been said, is not a sign of ulceration at all, it being often absent in cases which go on to perforation, and being less frequent in typhoid fever than in typhus, in which latter disease, as we know, there are no ulcers at all. In view of all these possibilities, however, can there be any objection to allowing a little meat or egg or other food which will be digested *in the stomach* as soon as the fever has subsided and the gastric juice has again become capable of performing its function? I think not; and for some years it has been my practice to allow small quantities of finely divided meat—chiefly beef—as soon as the temperature has become normal. Thus far I have seen no harm result, and I think, on the contrary, that convalescence has been thus accelerated, and the patient's comfort promoted. My attention was first directed to this by an experience which occurred some years since in this wise: An assistant in my laboratory, a third-year medical student, contracted typhoid fever, and was treated in one of the wards of a well-known hospital. After his recovery, he assured me that he returned to solid food two weeks before the physicians were aware of the fact; and in response to further questioning from me, he told me that one of the kitchen-maids took pity upon him in his starving condition, and brought him secretly solid food of various kinds from the kitchen. Although aware of the danger of eating it, his hunger was so great that he was unable to restrain himself, and he partook freely without anything but advantage, the doctor who had him in charge meanwhile assuring him that only his rigid abstinence from everything except milk could have brought about so rapid a convalescence.

Cayley relates a similar case in his very valuable Croonian Lectures on typhoid fever, delivered before the Royal College of Physicians in London in 1880—lectures upon which I have not hesitated to draw largely to-night, deeming it useful to bring to your notice valuable testimony from all available sources upon this very important subject. The case to which Cayley alludes was that of a boy, about fourteen years of age, who passed through a severe attack of typhoid fever under his care in the Middlesex Hospital, and whose appetite returned before the temperature became normal. He continued to be restricted to liquid food. He complained to his mother, who remonstrated with the physicians. Cayley endeavored to explain to her the danger of beginning solid food too soon, to which she replied that she would rather see her boy die of fever than starvation. She accordingly took him home, stuffed him with solid food, and he recovered rapidly—much sooner, Cayley thought, than if he had remained in the hospital on restricted diet.

In selecting the solid food to be first administered to a convalescent from typhoid fever, one should of course select, as I have already suggested, a food which can be digested in the stomach. Whether the stomach is capable of digestion or not, the patient's desire for food and his general condition must help us to determine; but what possible harm can come to a granulating ulcer in the intestine by administering beef in small quantities to a patient whose pylorus it is not going to pass?

Of the administration of beef peptones in typhoid fever I have no personal experience. They are recommended by high authority, and it is to be hoped that we may learn something of their utility to-night from those who are present and have used them. I can testify to the efficiency of condensed milk as a food for these patients, having treated many cases under circumstances in which fresh milk was not obtainable.

Let us pass for a few moments to the consideration of the fever as a symptom.

As a rule, we clinicians are prone to disregard the evil effects of prolonged high temperature upon the various organs and tissues of the body, and thus to underestimate the importance of interfering with this symptom, even though we may be quite unable to cope with its cause. Observation at post-mortem examinations teaches us that extensive and serious parenchymatous changes occur throughout the body as a result of the febrile process, either a long-continued fever which has not necessarily been very high, or a fever of short duration but of high grade. It is my belief, founded on numerous post-mortem examinations, that the patient never reaches the end of the third week of an average typhoid fever without the muscular wall of his heart having undergone in places a granulo-fatty change. We find the muscular fibres in many situations in the organ so filled with granular material that the transverse striæ are obscured altogether, and in some cases minute drops of fat are distinctly visible. A similar change under similar circumstances is frequently seen in the glandular cells of the pancreas, salivary glands, liver, kidneys, gastric tubules, and the voluntary muscular fibre. Another change in the voluntary muscles, known as the waxy or vitreous change, was first described by Zenker. All the voluntary muscles are liable to it, including the diaphragm, in which latter situation its seriousness need not be pointed out. Vascular changes also occur, as is evidenced by minute hemorrhages beneath the serous membranes seen so frequently. Such changes, of course, are not peculiar to typhoid fever. I have frequently found them in other conditions of high temperature, even after high temperature of comparatively short duration, as in cases of sunstroke. These lesions, then, are the result of the febrile process, whatever be the essential lesions of which that process may happen to be a symptom. In connection with this subject, Cayley observes as follows:

"It can hardly be doubted that the result of a large number, if not the majority, of fatal cases of typhoid fever is due to these changes. If we exclude those deaths which are directly caused by the intestinal lesions, as perforation and hemorrhage, which, after all, are the minority, the remainder

may for the most part be ascribed to failure of the heart and central nervous system. And of these, failure of the heart, with its concomitant congestion of the lungs, plays the most important part."

Max Schultze has demonstrated, under the microscope, the injurious effects of high temperature upon living cells.

There is a marked diminution in the number of red blood-cells in fever; and the febrile wasting of the body has been estimated by so good an observer as Leyden, in Berlin, in some cases at an average daily loss of seven parts per thousand of the entire weight, this being not merely the wasting of inanition, but being due largely to the increased consumption of the febrile process.

In a paper on the treatment of typhoid fever, one is hardly warranted in devoting so much time to the consideration of pathological changes except perhaps as a means of emphasizing the importance of certain methods of treatment to be presently advocated.

The various clinical symptoms which indicate the presence of these parenchymatous changes are too well known to us all to require more than passing allusion in this paper.

Lauder Brunton, in his valuable lectures on pharmacology and therapeutics, gives us, in words upon which it would be difficult to improve, the pharmacologist's view of these parenchymatous changes. He says: "When the power of the blood to convey oxygen is lessened by diminution of its red corpuscles, the consequent want of oxidation leads to the accumulation of fat frequently noticed in anæmia; and a tendency to obesity frequently appears after severe hemorrhage. The pathology of fatty degeneration indicates its treatment, etc. . . . But there is one way of influencing tissue-change which I must not forget. By simply keeping an animal in a hot chamber for a little while, the tissues decompose more rapidly, and evidence of their waste is to be found in the urine as increased urea. Quicker decomposition is followed by increased combustion, and the temperature of the body rises. Now begins a vicious circle; for the higher temperature itself quickens tissue-change, and the fire supplies itself with fuel. The heat, too, stimulates the cardiac ganglia, quickens the heart, dilates the vessels, and accelerates the circulation. Acting on the respiratory centre, it quickens the respiration, increases the supply of oxygen to the body, and thus fans the flame. But, quick as the respiration may be, rapid as is the circulation of arterial blood, it is, as Wickham Legg has shown, insufficient in many instances to keep pace with the decomposition of the albuminous tissues, the products of waste accumulate, and we find them in the fatty heart of fever patients and in the livers of Strassburg geese. Now we clearly see that, whatever may have led to the increased tissue decomposition and combustion in the first instance, the high temperature itself is a cause of mischief, and must be reduced."

Having thus reminded you of the varied lesions resulting from the febrile process, let me ask your consideration for a few moments of some statistics showing the results of treatment on the so-called expectant plan, which is so common here in New York, before proceeding to advocate the adoption of the antipyretic method.

Statistics of results of expectant treatment:

	Cases.	Per cent. deaths.
London fever hospital in 20 years,	8,000	18.9
" " " 9 "	569	15.9
Pauper hospital at Homerton,	1,509	16.8

Principal general hospitals in London during the ten or twelve years prior to 1880:

	Cases.	Per cent deaths.
St. George's,	387	19.6
Guy's,	295	19.3
University,	163	17.7
St. Bartholomew's,	635	16.3
St. Thomas's,	445	15.7
Middlesex,	461	15.6
King's College,	318	12.2
Total for hospitals of London,	14,125	17.8

	Cases.	Per cent. deaths.
General hospital in Vienna,	17,000	22.5
Hospital at Basle, in Switzerland,	1,718	27.3

Generally in principal Continental hospitals mortality varied from 16 per cent. to 25 per cent.

The English Army gives these results for six years ending 1877:

	Cases.	Deaths.	Per cent. mortality.
Home service,	545	131	24.0
Foreign service,	1,383	564	40.7
English Navy for the six years ending 1878,	414	110	25.5

Jaccoud recounted, as will be seen later, last year, at the Academy of Medicine in Paris, that he had collected 80,140 cases treated in Europe on the expectant plan, with a mortality of 19.23 per cent.

A glance at the statistics of our own army is instructive in this respect. I have taken the following facts from the *Medical and Surgical History of the War of the Rebellion:*

White Troops.	Cases.	Deaths.
During the year ending June 30, 1862,	21,965	5,648
" " " " 1863,	32,166	10,483
" " " " 1864,	10,116	4,475
" " " " 1865,	9,739	5,798
" " " " 1866,	1,285	635

This gives a total for these five years in our white troops of 75,368 cases of typhoid fever, with 27,056 deaths, this being a mortality of 35.9 per cent.

During the years 1864, '65, and '66, among our negro troops there were 4094 cases, with 2280 deaths, this being a mortality of 55.6 per cent.

We have thus a most painful showing from all parts of the world, the worst record of all coming from our own army. The mortality from this disease during the four years of war among our white troops was 35.6 per cent. During the year following the war in the same troops the mortality among those suffering from this disease was 49 per cent.

It must be borne in mind that the lower mortality in many of the London Hospitals quoted above is to be explained by the introduction into many of them of a modified form of the antipyretic

treatment, a faint semblance of which exists in some of our own hospitals.

In a paper by Dr. Francis Delafield, published in the *Medical Record* for November 17, 1883, some statistics of our own hospitals are given. Between January, 1877, and October, 1883, there occurred 1305 cases in the following hospitals: Bellevue, Riverside, Roosevelt, New York, St. Luke's, St. Vincent's, St. Francis's, and Mt. Sinai. The percentage of mortality, estimated by years, varied between a minimum of 20.1 per cent., in 1879, and a maximum of 30 per cent., in 1880. As showing the results in the different institutions, it appears that the lowest rate of mortality during these years occurred in the Mt. Sinai Hospital, where it was 17.1 per cent., and the highest in the Roosevelt Hospital, where it reached the rate of 36.8 per cent. In this very interesting paper is given a brief summary of the treatment in these various institutions which has produced these results. From this I extract the following:

"In the New York Hospital many patients are simply put on a milk diet, with the addition of a moderate amount of whiskey, and no other treatment is used. Peptonized milk instead of ordinary milk is thought to be of service. For high temperature, the body is sponged with equal parts of alcohol and water, and sometimes the fluid extract of eucalyptus is given in fifteen-minim doses. Quinine is not much used. Tympanites is treated with turpentine internally, and in stupes over the abdomen. Opium is given when there is hemorrhage from the bowels, or excessive diarrhœa.

"At St. Luke's Hospital, the treatment is the same, except that quinine is sometimes employed to reduce the temperature, and ergotine hypodermically for intestinal hemorrhage. Either opium or chloral is used to control restlessness and sleeplessness.

"At St. Francis's Hospital, if the cases are seen early in the disease, large doses of calomel are given, with the idea of aborting the disease. Quinine is given in large doses to most of the patients. The salicylate of soda or the benzoate of soda is given by some of the physicians throughout the disease. Cold water, in any form, to reduce the temperature, is but very little used. A solution of the acetate of alumina is given to nearly all the patients, to prevent or control the diarrhœa.

"At St. Vincent's Hospital quinine, in doses of two grains every two hours, is given to control the temperature. Cold water is not employed. Opium is used with diarrhœa and intestinal hemorrhage. At the Mt. Sinai Hospital quinine in large doses is given to nearly all the patients. Cold water is not much used, but sometimes the patients are sponged off.

"At Bellevue Hospital the treatment varies in the different divisions. In one division the peptonized milk is much used. Quinine in large doses is given when the temperature reaches 103°, and sponging is also sometimes used. Opium, the bromides, and cold to the head are used for the restlessness. In another division quinine, in moderate doses, is given to most of the patients. For temperature over 103° sponging with cold water, or the Kibbee Cot and sprinkling with cold water are used. Opium is given when needed. In another division carbolic acid (gt. j) and tincture of iodine (gtt. ij) are given every two hours early in the disease. Quinine in ten-grain doses every half hour is given to reduce the temperature. Sponging with cold water is sometimes used. Opium is employed for severe diarrhœa. In another division, occasional sponging, and whiskey and opium when required, are the only treatment.

"At the Roosevelt Hospital, full bathing has been tried in many cases, but now cold sponging is more used. Bismuth and pepsin are given to many of the patients. In all the hospitals, milk, either simple or peptonized, is the regular diet of the patients."

And now, let me ask, Have we reason to be satisfied with the expectant treatment of typhoid fever? Is the mortality, as shown in the figures taken from the books of our own hospitals, low enough to warrant us in being contented with the results of the various modifications of the expectant treatment in use here? Have we possibly among us any who think, with Skoda, that it makes no difference whether typhoid fever patients be treated or not? Before we endeavor, by discussion, to elicit answers to these questions, let me offer a few facts and figures from other sources, giving the results of antipyretic treatment.

(To be concluded.)

PELLETIERINE, A NEW TÆNIFUGE.

By JOHN L. DICKEY, A.M., M.D.,
of Wheeling, West Virginia.

A recent valuable addition to the remedies used against tænia is pelletierine. It is an alkaloid derived from the root-bark and stem-bark of granatum. It was discovered in 1878 by Tanret and was named in honor of another eminent French chemist, Pelletier.

The powder is grayish-yellow in color. The dose is given by one authority as two and a half grains, by another, fifteen. The preparation most largely used is gotten up in a proprietary form by Tanret, under the name of "Tanret's Pelletierine." It is of the color and consistence of maple syrup, and has a sweet and pleasant, but slightly astringent taste. Each bottle contains an ounce, which is the adult dose. An objection to it is the price, three dollars a bottle. Following is a case in which it was used:

Percy M., æt. 10, had been suffering from a tapeworm for three or four years. While the family lived in Cleveland he had been treated by several physicians at different times, large portions of the worm had been expelled, but the head still remained. Over a year ago the family removed to this city and the boy had been treated by a physician, who succeeded in getting large sections of the worm, but not the head. The case came into my hands, and half a bottle of "Tanret's Pelletierine" was administered on an empty stomach, but owing to the impossibility of getting the boy to take a sufficient cathartic we failed to get the whole worm. Several

weeks later, another and more successful attempt was made.

The boy was given a glass of milk only for supper, and the next morning for breakfast he took another glass of milk containing the remainder of the bottle of pelletierine, about half an ounce, without knowing he had taken any medicine. Half an hour later he was given a full dose of compound cathartic elixir, but his sensitive stomach rebelled and the elixir was vomited. A still more palatable cathartic was given, in the shape of half a bottle of citrate of magnesia, and at two o'clock I called and found him on the *pot de chambre*, having passed a large, watery stool and about half of the worm. Without removing him or breaking off the worm, I gave him an enema of about twenty ounces of tepid water and soap-suds, containing a drachm of common table salt. In a few minutes the injection was expelled with more of the worm, and taking hold of it and drawing it gently away, hand over hand, the whole worm was soon withdrawn, the small head and suckers being clearly visible to the naked eye. It measured about sixteen feet in length. Under a microscope, the four suckers and central fringe of hooklets proved it to be a tænia solium.

The advantages of this preparation of pelletierine over other tænifuges are its quick action, and its pleasant taste and easy administration. I had seen it successfully used last winter by Prof. Da Costa at the Jefferson College Hospital clinic, in a case that had resisted all the well-known remedies.

Giving the injection and gently drawing away the worm I consider important parts of the treatment in the above-mentioned case. It is probable that very often tænia are expelled as far as the lower bowel and that a part of the tangled mass is retained by the sphincter, thus giving the head a chance to re-attach itself. The worm did not once break in drawing on it, but was tough and elastic. After a few minutes' exposure to the air, however, it became brittle and broke easily.

MEDICAL PROGRESS.

The Climatic Treatment of Phthisis.—In a paper on this subject, read before the Ulster Medical Society, Dr. James Alex. Lindsay says that there are several cases in which the climatic treatment is plainly inadmissible.

1. In acute tuberculosis. Here no treatment is of even temporary avail, and the rapid prostration of the patient makes a resort to travel quite out of the question.

2. During acute exacerbations of the chronic malady. Here the wise treatment is to avoid all causes of excitement and irritation, to soothe the patient, and to wait until the disease shall again resume its chronic character.

3. Where the patient's means are insufficient to enable him to travel with reasonable comfort, or where there is an idiosyncrasy which renders travel peculiarly distasteful and irritating.

In regard to favorable cases:

1. Those which approach the remittent type are peculiarly favorable for climatic treatment.

2. The milder constitutional symptoms are, in proportion to the local pulmonary mischief, the more hopeful is the climatic treatment, and *vice versâ*.

3. It is important to inquire whether resort has ever before been had to travel, and with what results. Patients who are braced and stimulated by change of scene, and who possess much mental elasticity, are more likely to gain advantage than those who are depressed and disheartened by absence from home and the association of friends.—*Dublin Journ. of Med. Sci.*, February, 1884.

Double Operation for Empyema.—Brauser reports the case of a boy, æt. 3 years, who had pneumonia and double exudative pleurisy after scarlet fever. Pus having been found by the exploring needle, the right side was punctured and pus evacuated. Ten days afterward the same operation was performed on the left side and a quantity of pus evacuated. The child was well in two months.—*Centralbl. für Chirurg.*, February 23, 1884.

Antagonism of Paraldehyde and Strychnia.—At the meeting of the Société des Hôpitaux, on February 8th, Prof. Dujardin-Beaumetz reported the results of his experiments on this subject.

His experiments were made on rabbits. He has given to these animals twenty-five times as much as a fatal dose of strychnine, without causing death, after having previously given paraldehyde—there were only a few slight convulsions. These results are similar to those obtained by Luton in his experiments as to the antagonism between strychnia and alcohol. It is well known that Luton injected, in a case of nervous derangement due to alcohol, one-thirteenth of a grain of sulphate of strychnine in the morning, and repeated this in the evening, if the patient was not sensibly better. The antagonism between strychnine and alcohol was observed by Morray, in England, before the experiments of Luton. The latter has attempted to show that strychnia is an absolute antagonist to alcohol, for, while it causes the nervous troubles of alcoholism to disappear, it has no influence on the gastric and other symptoms of alcoholic intoxication. In the same way, Claude Bernard showed that large doses of strychnia had no influence on etherized animals. M. Dujardin-Beaumetz stated that Morselli had made experiments with paraldehyde and strychnia on dogs, with the same results as obtained by himself with rabbits. [The first experiments on this subject were made by Cervello, for an account of which see The Medical News, October 27, 1883.]—*Progrès Méd.*, February 16, 1884.

Treatment of Hernia by Peritoneal and Intercolumnar Suture.—In a paper on this subject read before the Academy of Medicine in Ireland, on January 11th, Mr. William Stokes describes an operation which consists in the deep insertion through the opened neck of the sac, and close up to the external abdominal ring, of a carbolized catgut suture or sutures, according to the size, width, and depth of the neck, and this is followed by the approximation or closure of the canal and pillars of the ring by the insertion of two or more sutures of a stronger and more durable material, such as chromicized catgut, carbolized

silk, or silver wire. It is, in fact, a dual system of suture, one being peritoneal and the other intercolumnar. He believes that in the great majority of cases this procedure will be found to be attended with satisfactory results, always provided that rigid Listerian antiseptic precautions are taken during and subsequent to the operation.—*Dublin Journ. Med. Sci.*, Feb. 1884.

NEPHRORRHAPHY.—On February 11, PROF. ANDREA CECCHERELLI performed this operation, in the Surgical Clinic in Parma, for painful movable kidney. This is the ninth operation of this kind, and the second which has been performed in Italy. After thirty-six hours there was no fever.—*Gazz. degli Ospitali*, February 24, 1884.

INTESTINAL RESECTION AND INTESTINAL SUTURE.—REICHEL, at the close of a report of several cases of resection and suture of the intestine, draws the following conclusions:

1. Sutures should only be placed in healthy intestinal structure, and the gut should be free of contents.

2. The indications for resection of the intestine are, gangrenous hernia, intestinal tumors and wounds.

3. At the conclusion of the operation the peritoneal cavity is to be closed by suture of the abdominal walls.

4. The sutured loop should be replaced entire, and then the abdominal cavity should be completely closed by sutures. Drainage of the peritoneal cavity, as well as fixation of the loop, is unnecessary and should not be used.

A most rigorous diet should always be enforced for the first few days after the operation.—*Centralbl. für Chirurg.*, February 9, 1884.

FRACTURE OF THE NAVICULAR BONE OF THE FOOT.—At the meeting of the Academy of Medicine in Ireland, on January 4, 1884, DR. BENNETT submitted two examples of fracture of the navicular bone, which he believed had not been heretofore described. The first and older of the two specimens came into his possession some years ago from the dissecting-room, so that of course he had no life-history of it, and it had since remained in the Museum of Trinity College. This year a second and more characteristic specimen of the injury came into his hands similarly, and without history. He at once observed its identity with the former example—in both the articular surface of the bone which receives the head of the astragalus presenting distinct evidence of united fracture, which traversed in a regular line the upper and outer part of the surface. Turning to the opposite articular surface, which supports the cuneiform bones, one is surprised to find only the most trivial traces of fracture marking the upper margin of the upper and outer part of the facet. In so thin a bone as the navicular, one would expect to find a close correspondence in the lines of fracture, no matter how arising, on its opposite faces; but it was evident that the planes of fracture originating in the hollow depression on the proximal surface had passed with extreme obliquity to the free margin, almost avoiding the distal surface. He concluded that the force which caused the injury in both cases was a degree of crushing which, if more strongly applied, would have produced dislocation of the head of the astragalus upwards and outwards. With the specimen last obtained he had the other tarsal bones, and exhibited them as proof that the injury in this case was limited to the navicular bone, the others being normal, except only the head of the astragalus, which showed slight trace of change in form, such as its articulation with a bone whose surface was altered by fracture would readily induce.—*Dublin Journ. of Med. Sci.*, February, 1884.

TREATMENT OF SINUSES BY THE INJECTION OF OIL OF TURPENTINE.—CECCHINI reports three cases in which the injection of spirits of turpentine into fistulous sinuses was successful. Believing that the non-closure of sinuses is often due to retention of pus, this being caused by the tendency of most of the injections used to coagulate the albumen with which they come in contact, Cecchini was induced to use turpentine on account of its not coagulating albumen, and also on account of its stimulating and diffusive properties. The cases reported were, two of fistula in ano, and one of fistula of the lower jaw.—*Gazz. degli Ospitali*, January 2, 1884.

MILIARY ANEURISMS OF THE STOMACH.—At the meeting of the Société des Hôpitaux, on Feb. 22d, M. GALLARD spoke of miliary aneurisms as causes of fatal hematemesis.

In 1875 he made researches on simple ulcer of the stomach, and in all the fatal cases he found an anatomical lesion large enough to account for the fatal issue. But in 1876 he encountered two cases of hematemesis, which caused sudden death, with no other lesion than ulceration of a miliary aneurism of one of the branches of the coronary artery. These cases appear to be unique. In January, 1884, he had a similar case—that of a man, æt. 48 years, who was brought to l'Hôtel Dieu on account of hemorrhage from the stomach. There were no special symptoms; the patient simply complained of loss of appetite, and slight gastric pains. Physical examination showed only distention of the stomach. In spite of rational, active treatment, the patient died the next day.

At the autopsy the intestinal tract was found filled with blood; the mucosa of the stomach was violaceous and slightly softened. In the greater curvature of the stomach, on the left near the cardiac orifice, was a small ovoid tumor, as large as an apricot, perforated at the top and on the line of a bloodvessel. There was no doubt that this was an aneurism. A single similar case was published in 1878, by Douglas Powell, in the *Transactions of the Anatomical Society of London.*—*L'Union Méd.*, February 26, 1884.

ABSCESS OF THE SPLEEN; ASPIRATION.—PARZEWSKI reports the case of a man, æt. 45 years, who, two years previously, had an attack of relapsing fever. Three weeks after his recovery he noticed a swelling on the left side, over the situation of the spleen. When an examination was made, Parzewski diagnosticated left pleurisy with effusion, and also found a fluctuating tumor over the spleen. Exploratory puncture with a Pravaz's syringe showed a dirty reddish-brown matter, containing altered blood-globules and detritus. In the course of five weeks three aspirations were made, by which about one pound and a half of the matter was withdrawn each time. The patient was finally cured.—*Centralbl. für Chirurg.*, February 23, 1884.

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SATURDAY, MARCH 29, 1884.

"CRANIOTOMY UPON THE LIVING FŒTUS IS NOT JUSTIFIABLE."

THIS is the title of the Presidential Address recently delivered before the Washington Obstetrical and Gynecological Society by DR. S. C. BUSEY. The discussion of this subject is peculiarly timely, since the tendency of obstetric literature has been to urge strongly the claims of the Cæsarean operation, and its modifications, to more favorable consideration than it has heretofore enjoyed. Of course, the subject is presented by Dr. Busey with earnestness and ability, but as to the conclusiveness of the argument, opinions will probably differ.

He holds that "If craniotomy is justifiable, science and the good of mankind demand that the limits of its application should be definitely fixed." Certainly all will agree to this statement, for a general truth—applicable to other operations as well—is expressed. In the greater consideration given of late to the use of the forceps, to turning, induction of premature labor, to symphysiotomy, to the Cæsarean operation and its substitutes, Dr. Busey sees presumptive evidence "of a widespread detestation of craniotomy." But, on the other hand, would it not be quite as just to say that the recent invention of such instruments as the basilyst of Simpson and the basiotribe of Tarnier is evidence that obstetricians recognize craniotomy as a necessary operation?

Again, the author commends the Cæsarean operation because "it may restore to women incapacitated by pelvic deformity the privilege and power of giving birth to an indefinite number of living children"—Lungren having proved that multiple operations are attended by a greatly lessened mortality—and he commends Porro's operation because it prevents subsequent pregnancies, and, therefore, no opportunity is given for craniotomies. But suppose women do not desire an indefinite number of living children, or again, suppose a woman, after having recovered from a Cæsarean operation, becoming pregnant again, chooses craniotomy, and the supposition is just as reasonable as the opposite, is there not an argument against the Cæsarean operation equal in force to that in favor of it?

Again, he states that "there is not, perhaps, living to-day a single obstetric authority of accepted repute who will claim the practicability of craniotomy in cases in which the conjugate is an inch and a half or less, and few hold it is justifiable when the diameter is two and a half inches or less." The statements of some living obstetric authorities do not fully sustain this position. According to Barnes, "craniotomy and cephalotripsy are the means of effecting delivery in cases in which labor at term is obstructed from disproportion, the pelvic contraction ranging from 3.25″ as a maximum, to 1.50″ as a minimum." Delore, referring to the conditions of application of the cephalotribe, says the limits of narrowing within which it can act efficiently are between 2.47 inches and 1.57. Professor Wasseige, in his work *Des Opérations Obstetricales*, Paris, 1881, refers to thirty-five cases of cephalotripsy he had done, with only six deaths; in only two of these could the fatal result be attributed to the operation, and four would have died no matter what operation had been performed; yet in one of the successful cases the conjugate was only one inch and a half. Pajot advises the cephalotribe in all cases of narrowing below two inches, if the instrument can be introduced; only when this introduction is impossible, the Cæsarean section.

In Dr. Godson's paper upon Porro's operation, published in the *British Medical Journal*, January 26, 1884, its distinguished author remarks, "I hope that the time is not far distant when Porro's operation may become one of selection, displacing, to a great extent, craniotomy." This seems a wiser and more practicable position than the one Dr. Busey has taken.

The general voice of the profession is expressed in the words of Dr. Barnes: "A law of humanity hallowed by every creed, and obeyed by every school, tells us where the hard alternative is set before us, that our first and paramount duty is to preserve the mother, even if it involve the sacrifice of the child." With this before us let one compare the table of Porro operations given by Dr. Godson with the result of cephalotripsy in the hands of Wasseige. Dr. Godson's table includes 134 cases, and the mortality of mothers was 55.97 per cent.

But in only 70 of these cases was the condition of the mother "favorable," and these 70 selected cases show a mortality of less than one in three. In Wasseige's cases of cephalotripsy there were 6 deaths in 35, that is, scarcely more than one in six. But 4 who died were unfavorable cases for any operation, and throwing out these, the mortality was less than one in fifteen. Admitting Wasseige's success as exceptional, we may take the results which Pajot had some years ago by his method of cephalotripsy, one death in four, and we still have a less maternal mortality than the best Porro operations. When we add to this professional view of the matter, the fact that women themselves will generally choose the sacrifice of their children rather than undergo any form of gastro-hysterotomy —and in such a matter as this the woman herself must where possible be given the deciding vote— the prospect of an entire abandonment of craniotomy is not encouraging.

RESPIRATORY THERAPEUTICS.

THE stimulus of the prevalent confidence in the Kochian doctrine of the parasitic origin of tuberculosis, has renewed one of those periodic devotions to inhalatory therapy which, since the time of the revered Hippocrates, have followed the discovery of novel gaseous compounds and elements, respirable and irrespirable; and of which the latest revival, a quarter of a century ago, still holds sway in the widespread use of medicated sprays in the treatment of affections of the air-passages.

The personal supervision requisite for effective medication by way of the respiratory tract demands more time than is usually bestowed on domiciliary visits to the sick; and to this may be attributed some of the disinclination of physicians to make use of the air-tract in the ordinary routine of practice. Hence, the method has received much less attention in America than in Europe, especially Continental Europe, where numerous resorts of easy access have been established for its systematic utilization. The great desideratum has been some economic plan of home-treatment, as a fair substitute for treatment at an inhalatorium. Many appliances have been constructed for the purpose. The majority of these being either inefficient, clumsy, or unsightly, they have not met with much favor; and this fact has prevented proper attention from being given to those which possess real merit.

That much good can be accomplished by resort to respiratory therapeutics is well known to those who have given them fair trial; good, too, in many instances, that cannot be accomplished by any other method of treatment. Thus, inspirations of slightly compressed air will distend unused air-cells far more thoroughly and safely than the most violent voluntary efforts; and do it, too, for the weak, as well as for the strong. They will often act mechanically as an expectorant, far more efficaciously than any drug, and, at the same time, improve the appetite instead of impairing it. In many cases of phthisis these results are simply invaluable. Expirations into rarefied air will exhaust emphysematous air-cells of much of their excess of residual air, and by relieving their tension will facilitate the return of elasticity to the lung tissue. This mechanical result alone will often cure asthma of recent standing in old subjects, and even cases of long standing in young subjects. The modifications in intrathoracic pressures, practicable by the use of slightly compressed or slightly rarefied air, are sufficient at times to overcome the mechanical impediments presented in certain valvular and other cardiac deficiencies, and thus favor the ultimate resumption of functions in partial abeyance.

Medicated airs, employed continuously or at intervals, overcome the fetor of bronchorrhœa, and pulmonary gangrene; soothe the irritability of diseased mucous membrane that provokes cough and prevents sleep; saturate the system medicinally with various volatile drugs; and thus do a great amount of good more readily than any other agents. They are the sole substitutes for a balsamic atmosphere within the reach of those who need it and cannot go where it is afforded by nature.

In fact, we cannot ignore the published records of the value of respiratory therapeutics, as collected in monographs and scattered in the journals; nor can we deny to inhalation a respectable position among the healing arts. Should the present impetus to the study of antiseptic inhalations help to place the entire method upon a more intelligent basis, and teach what can really be accomplished in its various modes of use, the revival will have been of service to medicine, even though it fail to find a safe weapon for destroying the dreaded bacillus tuberculosis.

SPURIOUS CYSTS OF THE BELLY DEPENDENT UPON DIFFUSE TUBERCULOSIS OF THE PERITONEUM.

IN the *Centralblatt für Chirurgie*, No. 6, 1884, PROF. KOENIG, of Göttingen, directs attention to a hitherto undescribed affection, which is interesting alike to the surgeon and the pathologist, and which consists of encysted serous exudations in the abdomen, the result of general tubercular peritonitis. The tumors thus formed, and as yet only observed in females, develop gradually, are mobile when small, but fixed when large and in contact with the inner surface of the abdomen, are the seat of undulating fluctuation, and are frequently multiple, smaller cysts being found in the vicinity of the largest one. They are met with at all periods

of life, not alone in subjects of other tubercular affections, but in those who are apparently free from such lesions elsewhere.

That these cases are not absolutely hopeless, is shown by the following example, which also affords a good illustration of the proper mode of treatment:

A previously healthy woman, thirty years of age, had observed for about three months a gradual enlargement of the abdomen, which soon became the seat of intense pain. The median portion of the belly was occupied, from the symphysis to the umbilicus, by a fluctuating, rather lax tumor, which lay in front of the intestines. A free incision disclosed behind the tubercular peritoneum a sac, filled with a slightly turbid, fibrinous fluid, the limiting tubercular membrane of which was excised, and the entire resulting cavity sprinkled with iodoform, after having been washed out with a solution of carbolic acid. A drainage-tube having been inserted, the wound was closed in the usual manner. The recovery was rapid, without any particular signs of reaction, and the woman was perfectly well and attending to her work two years after the operation.

TOXIC EFFECTS OF BONJEAN'S ERGOTIN.

The large use of ergot at the present time invests the subject of its toxic action with peculiar interest. Dr. Debierre, Agrégé of the Lyons Faculty of Medicine, has lately published an instructive example of chronic poisoning, and makes it the text of some valuable observations on the physiological actions of ergot. The so-called *ergotin* of Bonjean is not only an extract of ergot, but a concentrated extract. The patient, a woman of twenty-five, suffering from menorrhagia, took, in the morning, a quantity estimated at seventy-five to ninety grains of the ergotin. The hemorrhage was arrested, and did not recur. At noon, the patient ate some food with a good appetite, and for six hours after the ingestion of the ergot there were no symptoms of toxic action; then, however, severe pains began to be felt in the hypogastric region. A sense of suffocation came on, and urgent demand for more air was made. The mucous membrane of the mouth and throat became exceedingly dry, and the skin was dry, tense, and retracted. The abdominal distress extended to the chest, and severe pain was felt along the course of the œsophagus and bronchi: it had a rasping and constrictive character. In about four hours after the beginning of the pains, tonic and clonic convulsive shocks, having some resemblance to epileptic seizures, were experienced. The respiration was accelerated to 50 per minute, but continued shallow; the pulse was small, soft, and had fallen to 50; and the temperature declined to about half a degree below the normal standard. The surface became pale, cold, and benumbed, and there was a subjective sensation as if the skin were compressing the body with a vice-like grasp. Sensibility to touch, to pain, and to cold and heat declined, and the tips of the fingers, the lips and the tongue, and the bottoms of the feet became anæsthetized, and gradually the anæsthesia extended over the whole body. Vertigo, tinnitus aurium, obscurity of vision, and mental hebetude were experienced; and these nervous disturbances culminated in the epileptiform seizures above referred to.

The restlessness, anxiety, and depression were so considerable, that Dr. Debierre decided to administer ether subcutaneously. The good effects seemed to be little short of magical. The pain ceased, the respiration became calm and easy, the pulse increased in strength and volume, the dyspnœa was no longer experienced, the surface grew warm, and the nervous disturbance subsided. During the following night there was some recurrence of the pain, the dyspnœa, and the præcordial anxiety, but not of the convulsive phenomena. Ether was again given subcutaneously, and to some extent by inhalation; coffee was administered freely, and two doses of chloral, aggregating forty-six grains, were also given. By these means, a decided amelioration of all the symptoms was effected by morning. During the second day, the anæsthesia persisted in a less degree, there were occasional attacks of muscular spasm and of pain, and a strong sense of lassitude was experienced. On the third day of the poisoning, there were still occasional attacks of spasm, and the pectoral and abdominal pains now and then occurred, especially when food was swallowed. On the fourth day the principal symptoms had greatly lessened; vision became clear, the heaviness of the head and the singing of the ears subsided, the constrictive pains in the stomach and abdomen abated materially, the general sensibility returned to the normal standard, and the sense of exhaustion had nearly gone. During the course of the treatment which had effected these results, two drachms and a half of chloral and three drachms of ether were administered. It is an interesting fact, that the most effective means of relief to the symptoms had been the subcutaneous injection of ether. A more exact antagonism has been shown to exist between amyl nitrite and ergot, but this fact was not known, or was not utilized.

The following conclusions seem to be properly deducible from the experience in Dr. Debierre's case:

First, as to the rate of absorption. So many hours elapsed before the symptoms began, that it would seem to confirm the view which maintains that absorption of such medicaments does not occur in the stomach, but in the intestines. In favor of this theory are quoted the experiments of Bouley and

Colin, who found that even large doses of strychnine introduced into the stomach of the horse did not have a toxic effect until the ligature which had been put around the pylorus was divided. In Dr. Debierre's case, the ergot remained a number of hours in the stomach before absorption occurred, contrary to the usually accepted opinion that its action begins in about twenty minutes, and ends in an hour or two.

Second, as to the effects of ergot on the circulation. All the symptoms referable to the circulation indicate that ergot both slows and enfeebles the heart, and contracts the arterioles, but does not increase the vascular tension. This result is in accord with the experiments of Yvon and Tanret, who found that ergot causes contraction of the vessels, after division of the sympathetic, whence they conclude that it acts directly on the organic muscular fibre.

Third, as regards its effects on the nervous system. The cramps and convulsive phenomena, but especially the violent pectoral and abdominal pains, signify spasm of the muscular fibre of the vessels of the bronchi and of the intestinal canal, respectively. To the same action must be attributed the pallor and coldness of the surface, and the subjective sense of chilliness, and, no doubt, also the anæsthesia. The action of ergot on the unstriped muscular fibre admitted, all of the symptoms, indeed, produced by this agent are readily explicable. The slowing of the heart and the diminished acuity of vision, under these circumstances, mean lessened blood-supply to the cardiac motor ganglia and to the retina, respectively. The same action extended to the brain, the observed cerebral symptoms become a necessary result. This theory does not imply, however, as has been heretofore maintained, that ergot stimulates the ganglia and fibres of the vasomotor system.

ELYTROTOMY IN EXTRAUTERINE PREGNANCY.

THE operation of elytrotomy in extrauterine pregnancy is so infrequently performed, that the successful case reported at a late meeting of the Academy of Medicine of Paris, by PINARD, cannot fail to interest our readers. The subject was thirty-one years old, and became pregnant for the third time. This pregnancy was marked by acute pains in the abdomen, inability to engage in her usual avocations, and necessity for remaining recumbent. At the end of pregnancy the ordinary symptoms of labor, though in a less degree, occurred; these passing away, were followed by enlargement of the mammary glands, as after normal labor. At the end of two months the abdominal tumor, which had remained stationary from the time of the symptoms of labor, rapidly doubled its size, and an examination showed that this increase was due to an accumulation of liquid within it; simultaneously acute pains in the abdomen, difficulty in micturition and in defecation, and grave general symptoms appeared. Tarnier being consulted at this time, advised the operation by the vagina, because of the great prominence which the tumor offered in the posterior vaginal cul-de-sac. Accordingly, Pinard incised the salient part of the vagina, and without any difficulty removed the fœtus; the placenta was adherent, and no attempt was made to remove it, but the cystic cavity was injected every two hours with a solution of corrosive sublimate, 1 to 2000. These injections were continued for eighteen days with the same regularity, when the spontaneous detachment of the placenta and its discharge occurred; meantime there was not the slightest indication of mercurial poisoning, or of septic infection. The patient was quite well in a month, showing only a long, red cicatrix in the vagina.

It is stated that only one other case is known presenting the same conditions, and followed by success. But we need but refer to Deschamp's monograph upon extrauterine pregnancy, Paris, 1880, to find two similar cases; one occurring to Schroeder, and the other to an English practitioner, while successful elytrotomy in early pregnancy has been twice done in New York, once by Harrison, and once by Thomas.

PARALDEHYDE.

DUJARDIN-BEAUMETZ, the eminent therapeutist, has recently (*Bulletin Général de Thérapeutique*, January 30, 1884) examined into the physiological action and therapeutical effects of paraldehyde. This investigation included comparative observations with other known hypnotics and anodynes. All the patients taking paraldehyde found it much less disagreeable than chloral. In ten to fifteen minutes after administration, some subjects, especially females, experience a transient dizziness, which is succeeded by a calm, refreshing sleep, lasting from twelve to eighteen hours. No heaviness or headache is felt on awakening; but, when a full dose is taken, the perspiration exhales a strong odor of aldehyde. As a hypnotic, merely, paraldehyde is superior to chloral and opium, but it does not possess the power to relieve pain. In a case of hepatic colic it afforded no relief. It is in insomnia without pain that its utility is undeniable. It has been found to act happily in the insomnia of the morphiomaniac, and in cases of simple wakefulness unattended with pain. These results accord with the observations made in Philadelphia, with which our readers are familiar.

Dujardin-Beaumetz concludes that we have in paraldehyde a useful addition to our therapeutic resources.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, March 11, 1884.

THE PRESIDENT, R. F. WEIR, M.D., IN THE CHAIR.

SPECIFIC MYOSITIS OF THE GASTROCNEMIUS.

DR. F. LANGE presented a patient whom he first saw about three weeks ago. At that time there was a tumor in the calf of the left leg. The difference in the circumference between the two calves was at the lower part four and four-fifths inches, while at the tuberosity of the tibia it was about two inches. Some of the symptoms led Dr. Lange to assume that it might be of specific nature; he treated the patient accordingly, and the tumor had diminished considerably in size. He intended to present the patient later in order to see whether the result of treatment will be as he expected. He regarded it as specific myositis of the gastrocnemius, extending as high up as the upper attachment of the internal belly of this muscle, so that it could be traced into the popliteal space behind the hamstring muscles. The initial lesion occurred fifteen years ago. No secondary symptoms followed, but later, the patient suffered from a rheumatic affection, located particularly in the clavicles and sternum. These so-called rheumatic attacks were repeated often, but were always treated successfully by the internal administration of iodine. There had never been any affection of the throat or mucous membranes. For a number of years a stricture has existed, which Dr. Lange had located in the prostatic urethra, and it was yielding to the use of bougies. There was also sclerotic thickening of the skin of the pubis, with central depression and peripheral infiltration. The inguinal and other glands, especially the cubital, were enlarged. There was also a deep depression of the skin of the affected calf, but there had not been any ulceration, as the patient said. Dr. Lange thought that probably there had been a subcutaneous gumma which had undergone softening, with subsequent subcutaneous cicatrization. The scar was pigmented, and presented the characteristic appearance of a specific scar. The patient himself traces the origin of the tumor to a small round nodule, which could be felt beneath the skin five years ago in the neighborhood of the scar, and gradually increased in size. Treatment had been energetic, and consisted of daily inunctions of sixty grains of mercury, and at the same time the patient had taken iodide of potassium and mercury internally, according to Ricord's formula. Since about seventeen days, the tumor had been diminishing in size, and was considerably smaller than when the patient first came under observation. At that time the calf was monstrously enlarged and somewhat œdematous; at its lower portion there existed slight redness of the skin with elevation of temperature. While it could be made out clearly that the tumor belonged to the muscular substance of the gastrocnemius, especially in its inner portion, there was still present a diffuse thickening of the surrounding parts, which made a thorough distinct palpation of the boundaries of the tumor impossible. The circumference of the calf has already decreased by two inches in the lower part, and one inch in the upper, corresponding to the tuberosity of the tibia. The tumor itself can be traced more distinctly as a lengthy, hard mass, which is divided into two portions by a slight depression. This relation could only be made out a number of days ago. At no time had there existed any considerable functional disturbance.

He had also seen a gummatous tumor as large as a goose-egg, which occupied the tendon of the biceps femoris, and under specific treatment disappeared entirely.

THE PRESIDENT said that he had seen a similar infiltration in the sterno-cleido-mastoid, and also in the coraco-brachialis muscle, but not of equal size. He asked Dr. Lange if any of the methods by which he determined the location of the stricture in the prostatic portion of the urethra embraced the passage of a full-sized sound to the point of obstruction, with a coincident rectal examination to determine whether the obstruction was in the prostatic urethra. It was the great rarity of the occurrence of stricture in this portion of the urethra that led him to ask these questions.

DR. LANGE said that he had not resorted to the method last mentioned by the President, but that he located the stricture by simply introducing a bougie, which passed in readily up to the point of obstruction, the latter being located so far behind that it must be in the immediate vicinity of the neck of the bladder. The patient, for a number of years, had noticed a diminution in the size of the stream, which within the last few months had been reduced nearly to a dribble.

DR. W. T. BULL presented a case of

RUPTURE OF THE TENDON OF THE QUADRICEPS FEMORIS,

which had been treated by Dr. C. A. Jersey. The man was injured, on Nov. 22, 1883, by having his leg forcibly flexed; he was seen within ten minutes after the injury was sustained, and a dressing of cotton, with a posterior splint, was applied to leg. Twelve hours later this dressing was removed; there was slight swelling around the knee-joint, the anterior surface of the thigh was ecchymotic almost to the groin, and there existed a well-marked depression about two inches above the knee—probably three inches in width. The power of extending the leg was lost. Three long strips of adhesive plaster were passed around the thigh at different points in a figure-of-8 form, making traction in the direction of the knee, approximating the torn edges of the tendon. A Canton-flannel roller was applied from toes to groin, and a plaster splint from ankle over all. The thigh was held at almost a right angle to the body during the application of the entire dressing. The leg was left in this appliance for forty days; after the third week the patient was permitted to go about on crutches. At the end of forty days, the splint having become somewhat softened, a new one was applied, the adhesive-plaster strips and Canton-flannel roller not being disturbed. This second splint was left on for twenty-one days, the patient during the last week being permitted to walk about without crutches. At the expiration of this time the entire dressing was removed. A posterior felt splint, with a bandage from the toes, was worn for one week; then a rubber bandage was applied, which the patient has worn up to the present time. Patient has used a cane until about the tenth of February.

Now—three and a half months from the receipt of the injury—the man has a very useful limb, flexion at the knee being possible to three-quarters its normal extent, and extension perfect and strong. There is much thickening of tissue about the seat of injury, but no sign of the defect beneath the skin usually seen after the rupture of the belly of a muscle.

He had seen several cases of this injury, and in but one was there finally any power of extension whatever, and that was a case in which it existed six months after the injury, and only the fibres of the rectus were torn. As a rule, in an injury of this description the patient loses the power of extension, and he had been led to regard it as a far worse injury, as far as the functions of the knee-joint are concerned, than fracture of the patella. He knew of two persons in whom rupture occurred upon both sides, and both had since been obliged to wear artificial support to enable them to walk.

DR. C. T. POORE had had a case in which rupture occurred on the right side, and there was separation to the extent of about four inches. The patient recovered, and is now able to walk without artificial support, has no limp, and can bend his leg, the only apparent defect being that the extensor muscle is not quite as strong as the other. He treated it by the use of a plaster-of-Paris splint, with a strip of adhesive plaster over the course of the muscle, to hold it down at the point of rupture. There were ultimately about three inches of new tendon formed.

THE PRESIDENT had met with five cases of this injury within two years. In only one was the rupture complete, and he was inclined to believe that in the majority of cases the injury was confined to the central tendon, and that in such cases we had a much better prognosis. In the one torn completely across, which was only seen several years after the accident, there was little or no difficulty in the patient's walking, and no posterior splint was required. All the other cases were treated by the approximation of the divided ends of the muscle by means of strips of adhesive plaster over the thigh anteriorly and fastened below to the sides of the leg, and the use of plaster-of-Paris bandage. He had at present a patient, whom he hoped to show at the next meeting of the Society, in whom both quadriceps tendons had been torn across at the same time, and in whom recovery was nearly complete. In all his cases the injury was the result of muscular force.

DR. JAMES L. LITTLE then read a paper on the

TREATMENT OF FRACTURES OF THE PATELLA BY THE PLASTER-OF-PARIS SPLINT.

(See page 353.)

THE PRESIDENT asked, in presenting the above paper for discussion, what experience, if any, had been obtained by the members of the Society in the treatment of recent fractures of the patella from aspirating the joint for blood effused within it, which had been said to be one of the causes of separation of the fragments. Mr. Heath, of London, and other surgeons had spoken of this method as being serviceable. In the recent discussions which had taken place in Great Britain, arising from Sir Joseph Lister's notable paper on fracture of the patella, the point was made that one of the reasons why bony union did not take place in fracture of the patella was that little fragments of fibrous tissue were caught between the ends of the broken bone. McEwen, of Glasgow, also alludes to this fact, having proved it in one or two dissections. If aspiration allows the fragments to be apposed, it would seem to be sound surgical practice, before applying a splint, to get rid of this interposing small amount of fibrous tissue, by bringing the fragments together and rubbing their surfaces strongly over each other for a few moments.

DR. SANDS doubted whether, in average cases of fracture of the patella, marked superiority could be claimed for any single method of treatment—all methods being more or less imperfect. The treatment recommended by Dr. Little resembled very closely the common one, which consists in placing the limb upon a straight posterior wooden splint, and applying straps of adhesive plaster obliquely above and below the fragments.

He had for many years believed that the extent of primary separation of the fragments depended mainly on two causes, namely, laceration of the fibrous tissues and distention of the knee-joint with blood or inflammatory effusions. He deprecated the premature and forcible attempts often made to approximate the fragments while the joint was distended, believing that such treatment was liable to increase their separation by causing further effusion. He quite agreed with Dr. Little in recommending that, until the subsidence of the swelling, treatment should be restricted to rest of the limb in an extended position, the use of some evaporating lotion, and, when necessary, moderate pressure by means of a flannel or elastic bandage.

He remembered having read many years ago of cases treated in St. Bartholomew's Hospital by simply placing the limb at rest in a straight position upon a posterior splint, approximation of the fragments occurred spontaneously, when the swelling subsided, and very good results were obtained. The uniting medium, although ligamentous, being generally very short, it seemed to him that by the method recommended by Dr. Little, although good results would often be obtained, there might sometimes be found a liability to a tilting of the fragments. Dr. Sands had endeavored to obviate this difficulty by resorting to a method practised by many surgeons, in which strips of moleskin adhesive plaster, attached to the limb above and below the seat of fracture, are brought together and fastened by a buckle directly over the broken bone. Of course, it was presumed that when Dr. Little spoke of approximating the fragments, he meant an approximation of the upper to the lower fragment, as no amount of force was capable of stretching the ligamentum patellæ.

Dr. Sands had also, in some cases, resorted with advantage to Malgaigne's hooks, the points of which were prevented from puncturing the skin by the interposition of several layers of thick adhesive plaster. This practice, he believed, originated with the late Mr. Spence.

He was a little doubtful whether, in bad cases of fracture of the patella, attended with great separation of the fragments, any treatment would produce good results short of a surgical operation. He was convinced, however, that in a majority of cases, many forms of apparatus can be used which would enable the patient to obtain a useful limb.

DR. W. T. BULL said, with regard to the plaster-of-Paris bandage, as distinguished from the plaster-of-Paris splint

in the treatment of this fracture, that he thought Dr. Little had expressed himself adversely to the plaster-of-Paris bandage a little too strongly. It had certainly been thoroughly tested in New York hospitals, and was now generally used in a number of institutions, and he thought the results obtained did not justify the expression that it may justly be condemned.

With regard to this application in the treatment of fracture of the patella, it was the only apparatus which he had used; he regarded it as the simplest form of apparatus that will keep the knee absolutely still, and one which is more easily applied than the apparatus described by Dr. Little. Before applying the plaster bandage he always drew the upper fragment down as far as possible with the hand, and held it there by means of a single strip of adhesive plaster, while a second strip served to "steady" the lower fragment. He had met with a good many cases of fracture of the patella during the last six or seven years, and he had yet to see one in which the upper fragment could not be approximated to within one-fourth to one inch of the lower fragment within a certain time. He said a certain time, because this period varied a great deal according to the quantity of effusion into the joint. He had seen two cases in which the upper fragment could be drawn down directly, and there the plaster splint was applied within a few minutes and allowed to remain until the bone had united by ligament. He had not seen any cases in which the union was entitled to be considered as bony union.

It was suggested, some years ago, that the removal of the effusion could be accelerated by aspiration, and Schede suggested puncturing, washing out the joint, and then treating the puncture with antiseptic dressing. Dr. Bull had not had any experience with the latter method, but he had tried aspiration in two cases. In both he aspirated the joint twice, because the first operation did not facilitate approximation of the fragments, although a small quantity of bloody serum was withdrawn. The second aspiration was about as futile as the first. He had about reached the conclusion that the best method is to allow the effusion to subside, aiding absorption only by firm compression, such as can be made by a firmly applied cotton dressing over the entire limb (laid on a Volkmann's splint), and he had resorted to that measure in cases in which there was a good deal of effusion, and at the end of a period varying from five to ten days, the upper fragment had been approximated within one-quarter to one inch of the lower one with great facility. With such a ligament, if not stretched by flexing the joint too early, the joint functions would be satisfactory.

It seemed to him that no one who had had experience in the use of the apparatus recommended in Dr. Hamilton's *Surgery*, could wish to use it a second time, because it requires constant attention, and the bandages must be renewed every day, or, at furthest, every second or third day. While he believed the apparatus described by Dr. Little is certainly safer for surgeons not experienced in the use of plaster of Paris in the shape of a bandage, he thought the plaster bandage safe enough for any man who has had reasonable experience in the application of bandages in general to the extremities.

DR. F. LANGE had observed a number of cases in which separation of the fragments existed years after injury, varying from one and a half to two and a half inches, and in which the limbs were entirely useful, and the power of extension complete, the patients being able to go up and down stairs without the slightest discomfort. He had treated a number of such cases, and among them were two in which fracture of the patella took place several times, besides one in which separation of the tendon of the quadriceps took place, and in which a gap exists now sufficiently large to allow of the interposing of the hand, yet without functional disturbance of the leg. It seemed to him that after a time the lateral part of the capsular ligaments took up the function of the muscle to a certain extent.

DR. GEORGE A. PETERS had seen one case of fracture of the patella with separation of the fragments to the extent of two inches, and the patient had perfect use of the limb, and was even able to skate.

DR. BULL said that Dr. Little had justly impressed the fact that bony union is not necessary for a useful limb, a fact frequently overlooked by those who have advocated wiring of the patella. He knew of one policeman and one fireman who at the present time are on active duty, and who had ligamentous union of a fractured patella. In one case the ligament was about an eighth of an inch long at the first, but it gradually lengthened until the fragments were separated to the distance of one inch, and yet the man was not aware of the fact.

DR. C. T. POORE asked, if the question of ability to walk was not one of ability of the patient to use the muscle attached to the ruptured tendon. He thought the disability consisted not so much in the separation of the fragments as in the weakness of the muscle which was attached to the upper fragment, and that the difficulty in walking was due to the impossibility for the patient to get accustomed to use the shortened muscle.

DR. LITTLE said that the lower strip of plaster in his apparatus was simply to steady the lower fragment while the upper fragment could be brought into close approximation.

With regard to the difficulty in walking with a long ligamentous union, he thought a distinction should be made between the power of extending the leg and the ability to walk. Patients with a long ligament uniting the fragments are often unable to make complete extension of the limb, but they are able to walk without difficulty. In a recent case in which he applied the splint, at the Post-graduate School, Dr. Powell, who had the case in charge, assured him that he found the patient the day after the accident walking about his room with the aid of a cane. About a year ago, Dr. Stimson presented a case before this Society, in which the patient had had each patella torn from its ligament, and no union had taken place. This man could not extend his legs, but was able to walk about with but little difficulty.

Another point of interest in connection with fractures of this bone, is the liability of the opposite patella to suffer from a similar injury. He had seen a number of cases of this kind. In all these the fractures were caused by muscular action. This is generally attributed to greater strain upon the sound bone and the greater liability of the patient to fall. In two cases which came under his notice, the patients told him that they had suffered a certain amount of pain in each patella before the fracture took place. He had never seen a case in which the fracture was caused by direct violence, that

afterwards suffered from a fracture of the other patella. It is possible that the true explanation of these cases is, that they are caused by an abnormal condition of the bone at the time of fracture. The slight amount of force which caused the fracture in both of these cases, and the pain in the bone felt before the occurrence of the injury, would seem to point in that direction.

Dr. Bull asked Dr. Little with regard to passive motion and the advisability of resorting to it, as mentioned in his paper.

Dr. Little said that he simply quoted Dr. Hamilton.

Dr. Bull said that he had always felt that it was not the right thing to do to resort to passive motion. One should always aim to obtain a short and very strong ligament, and he had always abstained from allowing the patient to move the knee-joint for at least ten or twelve weeks, and by the end of the eighteenth or twentieth week the movements had been satisfactory, and the joint had been strong.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 20, 1884.

The President, Fordyce Barker, M.D., LL.D., in the Chair.

Dr. Leonard Weber read a paper on

LOCOMOTOR ATAXIA AND SYPHILIS.

He commenced by saying that although pathologists had not yet succeeded in establishing the existence of such a thing as syphilitic sclerosis of the posterior columns of the spinal cord, there was a considerable amount of clinical evidence in support of a possible connection between the two affections. In former years it had been customary to omit any investigation of the cord as a seat of syphilitic disease, and it had been only within the last thirty years that there had been a change in this respect. In 1876 Fournier published his first communication upon locomotor ataxia as connected with syphilis, and in it he recognized three types of tabes: first, the lumbar, which was exclusively spinal; second, the cephalic type, in which the cerebral nerves were also affected; and, third, the ophthalmic, or amaurotic, type. The subject had also received the attention of a number of other authors, among which were mentioned Hammond and Hutchinson, and within the last four or five years it had been investigated with much interest by German writers. In 1878 Berger's article was published, and in 1879 Erb's first paper, in which he gave the statistics of one hundred cases. Just before the appearance of the latter, Dr. Weber had had the opportunity of talking with its author upon the subject, and it was in consequence of the interest excited in his mind by this conversation that he had written up the cases of locomotor ataxia occurring in his practice during the last twenty years.

Though his statistics were very remarkable, Erb's views were not received with great favor at the International Medical Congress at London in 1881. At an assembly of neurologists last year at Baden Baden, he had reported a second series of one hundred cases of locomotor ataxia, and in no less than ninety-one of them the patients had had chancre and syphilis, while in only nine was this not the case. On the other hand, in twelve hundred patients over the age of twenty-five, who suffered from nervous diseases other than ataxia, only twenty-two and a half per cent. had had syphilis; and, consequently, he was led to announce the proposition that tabes was probably a syphilitic affection, the development and area of which were determined by special causes. In this paper he stated that tabetic women were frequently syphilitic. Among those who distinctly denied the syphilitic origin of ataxia, Dr. Weber mentioned Moxon, Lancereaux, Westphal, and Rosenthal. They claimed that no causative relation had been proved to exist between syphilis and tabes, and that the prognosis, notwithstanding the most active specific treatment, was no better in cases of tabes in which the patients were syphilitic than in those who were free from any such taint.

Finally, in this connection, Dr. Weber alluded to the paper read before the American Neurological Association, in June, 1883, by Dr. Birdsall, of New York, in which forty-two cases of ataxia were reported, with a percentage of nine and a half patients presenting a history of syphilis. In looking at the statistics of this subject then, he said, one could not but be surprised at the vast discrepancy between different authors; the percentage of cases of tabes with a syphilitic history ranging all the way from one to ninety-one per cent. It was reasonable to assume, however, that it was not until recently that much attention had been given to the investigation of disease of the spinal cord in connection with syphilis. In paralytic dementia, some authors gave as high a percentage as sixty-five of cases in which the patients had had syphilis. Sigmund, after reviewing the cases of syphilis which had come under his care between the years 1849 and 1876, came to the conclusion that the disease (syphilis) was on the increase, both relatively and absolutely, and made the assertion that, on account of its multiform character, the gravity of its lesions, and the likelihood of its transmission to posterity, it was the worst affection that cursed humanity. In this opinion Dr. Weber said he could not but concur.

After speaking of masturbation—in females as well as in males—as a predisposing cause, especially in individuals of a neurotic temperament, not only to functional, but to organic disease of the nervous centres, and stating that in a few of his cases of locomotor ataxia it seemed undoubtedly to be the primary cause, he urged the importance in all cases of initial tabes of resorting to thorough antisyphilitic treatment, to exclude specific disease, if possible. In the cases of syphilis in his own practice during the past twenty years, he had not met with very many instances of disease of the nervous system. Some of the cases of locomotor ataxia which he had seen, it was true, presented a syphilitic history; but syphilis did not seem to him to bear the same direct causative relation to the disease that rheumatic trouble did. In tabes, in general, there was often a great difference in the symptoms in different cases, and it was difficult to ascertain the exact seat of the disease, since the neighboring parts, as well as the posterior columns of the cord, were liable to be affected. This was especially true of syphilitic tabes. At the last meeting of the American Neurological Association, Dr. Mills, of Philadelphia, had asserted that sclerosis of the posterior columns of the cord was probably of lepto-meningeal origin. The disease was protean in its pathological and

clinical manifestations, but three principal forms were recognized: first, the typical, as first described by Duchenne; second, the form in which the symptoms were less severe, and might be mistaken for functional derangement but for their persistence; and, third, the atypical, with which syphilis was most frequently associated. No typical case of ataxia had ever yet been proved to be of syphilitic origin, or had yet been cured by antisyphilitic treatment.

As to the diagnosis, the symptoms of specific and non-specific tabes were, for the most part, the same; and as to the prognosis, this was relatively favorable when the syphilitic trouble had not been of long duration, and when the symptoms were irregular in character, and yielded to specific treatment. In regard to the treatment, he could only say that the results had by no means proved equal to what had been anticipated by the advocates of the syphilitic origin of tabes. Still, in a certain proportion of cases, a fair amount of benefit had been derived from it, and the treatment that he advised was thorough inunction with unguentum hydrargyri, and the free use of baths and the iodide of potassium. During the last ten years, his own results had been better than in the ten years preceding, and he attributed this to the fact that ten years ago he gave up the use of the protoiodide of mercury and other preparations of the drug given internally, and since then had almost exclusively employed inunction, in the manner advised by Sigmund. He was confident that anyone who could try this plan thoroughly, would secure quicker, better, and more permanent cures in syphilis in general than by the internal administration of mercury. Occasionally a patient was met with in whose case inunction could not be practised; but such instances were rare. In sudden and alarming manifestations occurring in old syphilitic cases, the iodide of potassium, pushed to the limit of tolerance, afforded better results than any other measure.

Dr. Weber then gave some statistics taken from his own private practice. Of one hundred and thirty-four patients suffering from syphilis, one hundred and fifteen were males and nineteen females, and none were under observation for less than four years; the most of them from ten to twenty years. He gave the history of one of these cases, as it was of interest as being the only instance which had come under his notice in which acute syphilis occurred twice. At the time of the first attack, he placed himself under Dr. Weber's care, and, under the effect of treatment, the disease became latent within two years. He then had no further trouble for three years, when, five years after contracting syphilis the first time, he again had a venereal sore, which was followed by all the signs of acute syphilis, the attack being precisely similar in almost every respect to the first one which he had had. Within two years, the disease became latent; but from 1872 to 1876 he suffered more or less from neuralgic attacks. Of the one hundred and thirty-four cases of syphilis, there were eighteen, or thirteen and a half per cent., in which the disease attacked the central nervous system. In eight patients, six of whom were males and two females, the brain alone was affected; in five (all males) the brain and spinal cord together; and in five, four of whom were males and one female, the cord alone. Of the first eight, two had died of cerebral syphilis, and six were still alive, but not cured. Of the five in whom both the brain and cord were implicated, two had died and three survived; and of the five in whom the disease was confined to the cord, one (the woman) had died of syphilitic hemiplegia, and the other four were still alive.

Of locomotor ataxia, he had the records of seventeen cases. Out of the seventeen cases, three of the patients, or eighteen and a half per cent., were syphilitic. In one the syphilis was contracted after the tabes had existed for a number of years; but in the other two cases it seemed to constitute an important etiological factor. From his study of the subject he had arrived at the following conclusions:

1. There was not sufficient evidence to show that syphilis was the direct cause of locomotor ataxia.

2. There was plenty of proof that syphilis attacked the spinal cord as well as the brain and meninges, and that the disease might sometimes be followed by tabes.

3. Syphilis of the nervous centres occurred sooner in those not treated than in those subjected to a proper course of treatment.

4. Syphilitic nervous lesions were seldom, if ever, cured. Therefore, in order to prevent their occurrence, if possible, early and long-continued treatment of constitutional syphilis should be insisted on.

5. Mercurial inunction, properly carried out, constituted the best means at our disposal for reducing the disease to early and harmless latency.

The President remarked that in Dr. Weber's cases of ataxia with syphilitic history, the efficacy of specific treatment had not been specially emphasized, and said that he should like to present the history of three cases of his own, in which the therapeutic results were quite marked.

The first was that of a gentleman thirty-five years old, whom he was called to attend in 1875. He had severe pains in the knees and ankle-joints, walked with difficulty, and believed himself to be suffering from rheumatism. He rapidly grew worse, however, until complete paraplegia set in. There was total loss of sensation in both lower extremities, with paralysis of the rectum and bladder; but no mental impairment. Although he confessed that he had been frequently exposed to the danger of contracting syphilis, he denied ever having had a sore on the penis, but stated that he had sometimes noticed a little eruption on his skin and had had sore throat. Under the circumstances, Dr. Barker thought it well to try the effect of specific treatment, and prescribed fifteen grains of iodide of potassium, with one-sixteenth of a grain of corrosive sublimate, three times a day. Soon after, Dr. James R. Wood was called in consultation, and he expressed the opinion that the case was hopeless, but advised no change in treatment. The iodide was then increased to forty grains (no change being made in the dose of the bichloride), and in the course of two months the patient gradually recovered control of the lower extremities, while the paralysis of the bladder and rectum disappeared. He also regained his flesh, which, before, he had been rapidly losing. The treatment was kept up, with the addition of the use of galvanism, and two years afterward he was married. He remained in excellent health until about six weeks ago, when he began to suffer again from pains in his lower extremities. A few days since he was attacked by bronchitis, which was

attended by an amount of prostration altogether disproportionate to the disease; but under the use of doses of fifteen grains of iodide of potassium and ten grains of muriate of ammonia, he was now doing well.

The second case was that of a gentleman, fifty-five years of age, who complained of great difficulty in walking. He had been under the care of a well-known homœopathic practitioner, but on hearing of the result in the above case, had called in Dr. Barker. In 1844, he said, he had had syphilis in Paris, and had been treated by Ricord. He was placed on the same mixed treatment as the other patient, was considerably benefited, and had continued in comparatively good health. The treatment was still resumed at intervals. The third case was that of a physician who had been a surgeon in the Confederate Army, and who consulted Dr. Barker two years ago. His health had been gradually failing for one or two years, there being dulness of intellect, indistinct articulation and difficulty in using the limbs. Syphilis was suspected, although he denied ever having had the disease, and he was placed on fifteen grains of iodide of potassium with one thirty-second of a grain of corrosive sublimate, three times a day. After a fortnight Dr. Clymer was called in consultation; at that time he had paralysis of one side; but within a month the improvement was so rapid that both Dr. Clymer and himself regarded it as something marvellous. He had continued to do well up to the present time. Dr. Barker said that he had mentioned these instances simply for the purpose of illustrating one point, and that was the possibility of getting light in regard to the pathology in certain cases by the effect of therapeutic measures.

Dr. Amidon said that he desired to put himself on record as strongly opposed to the proposition to call typical locomotor ataxia a syphilitic disease. In the series of cases reported in Dr. Birdsall's paper, to which reference had been made by Dr. Weber, only nine and a half patients presented a syphilitic history. The connection between syphilis and ataxia, which certain authorities had endeavored to establish, was based entirely on statistical data; but the unreliability of such a basis was seen in the vast difference of results among the various writers who had compiled statistics on the subject. Our author, as he had been surprised to learn to-night, had put the proportion of tabetic cases with a history of syphilis as one per cent., while Erb in his last hundred cases had reported it at ninety-one per cent.; statistical inferences, therefore, he thought were utterly worthless. The deduction drawn from the results of treatment pointed distinctly to the fact that ataxia was not a syphilitic disease. A good many cases of ataxia of various forms, it was true, had been relieved or cured by antisyphilitic treatment; but never yet a single one of true sclerosis of the posterior columns. Again, the pathology of the disease showed that it was not syphilitic. If it were, it must necessarily be a tertiary lesion, and the tertiary lesions of syphilis were well recognized as of altogether different character from those met with in the affection under discussion. These were well shown in the liver, for instance, in which, whether there was originally a gummatous deposit or cirrhosis, the liver tissue finally became destroyed in the parts affected, and deep cicatricial depressions resulted, which were localized and well defined. The course of the disease also furnished an argument against its syphilitic origin. True progressive locomotor ataxia, as its name indicated, was very slow in its development; while the manifestations of tertiary syphilis were likely to appear suddenly, and rapidly increase in severity. The weight of evidence, he thought, therefore, was decidedly against the lesions of locomotor ataxia being a syphilitic lesion.

Dr. R. W. Taylor stated that he had already placed himself on record, in the work in which he had been a collaborator with the late Prof. Bumstead, as an opponent of this theory, based simply on statistics of the causation of locomotor ataxia by syphilis. He was, consequently, very glad to see the cautious manner in which Dr. Weber had dealt with the subject. The syphilitic etiology of the disease had been first hinted at by Duchenne, but simply as the result of the fact that he had noticed a coincidence of the two affections in certain instances. He found, however, that antisyphilitic treatment had no effect on locomotor ataxia, and from his study of the subject was led to the conclusion that there was in reality no connection between the two. Until Fournier's publication the profession had looked upon sexual excess, alcoholism, gout, rheumatism, cold, etc., as the primary causes of tabes; but Fournier was struck by the fact, as was indeed very natural, that out of thirty cases of ataxia which came under his observation, twenty-four of them were in syphilitic subjects, and it seemed evident to him that from such a large proportion of syphilitic subjects, syphilis must have a direct causative relation to ataxia. The grounds on which Fournier based the connection between the two diseases were as follows:

1. Frequency of association (as seen in Fournier's cases).

2. The occurrence of ataxia in the tertiary period (by which was understood the third year).

3. Identity of symptoms. (The ataxic symptoms which syphilis produced, however, Dr. Taylor held, differed widely from those seen in true locomotor ataxia.)

4. The benefit derived from antisyphilitic treatment. (In this Fournier stood almost alone.)

5. The symmetry of the lesions. (Syphilitic lesions, on the contrary, were, as a rule, asymmetrical.)

6. No other cause could be assigned for the disease.

Fournier, in his last work, had reported 94 syphilitic cases out of 103 of ataxia; Erb, in his first hundred cases, 61 per cent.; Vulpian 15 out of 126; and Rosenthal 1 out of 65. Here was certainly sufficient disparity to cause doubt in regard to the matter.

There were two other points which could throw more light on the subject, viz., pathology and therapeutics. In the pathological anatomy of syphilis of the nervous system there are found: (1) affections of the vessels; (2) hyperæmia; (3) connective tissue infiltration; (4) gummatous infiltration. These lesions were perfectly well understood. In this distribution it was known that syphilis did not invade a system; its manifestations being in patches, or at random, as it were. The lesions were likely to be of meningeal origin, and scattered more or less asymmetrically. Westphal and Gowers had made autopsies in those dying from ataxia in syphilitic and non-syphilitic subjects, and found precisely the same lesions in both. Erb said very ingeniously that syphilis might produce "a neuropathic state," in which lesions of the nervous system were apt to occur. This expression, however, was a very vague and indefinite one.

In the statistics reported it was painful to read some of the details of the cases (which are for the most part retrospective), given as conclusive evidence of the patients having had syphilis, and the histories were frequently not methodically and critically examined. Yet he (Dr. Taylor) had been called to task by at least one critic in this city for his abrupt statement in the work before referred to, that there was no proof, other than that furnished by statistics, of the syphilitic origin of ataxia, and that the pathological features of the two affections are entirely different.

Dr. Birdsall said that he came in too late to hear the greater part of Dr. Weber's paper, but he heartily agreed with him in his conclusions, particularly the first and second. The statistics which he had reported in his own paper before the American Neurological Association, he had collected to add to those already recorded in Europe, and he believed that they were the first that had been made in the United States up to that time. Of the forty-two cases of locomotor ataxia given, four were in syphilitic subjects, or nine and a half per cent. Most of these had been under his personal observation, and at the Department for Nervous Diseases in the Manhattan Eye and Ear Hospital the work of carefully recording such cases, and noting the presence or absence of syphilis had been begun long before Erb published his first series of cases. It was a matter of surprise to him that his statistics varied so greatly from those of Erb, though they were not so widely different from those of some other writers. Rosenthal had reported one hundred and five cases, with twelve per cent. syphilitic; Bernhardt thirty-seven, with twenty-five per cent. syphilitic; Westphal seventy-five, with thirty-three per cent. syphilitic; and Gowers thirty-three, with thirty-seven per cent. syphilitic. In Erb's first hundred cases, as had been previously mentioned, eighty-eight per cent. of the patients had had syphilis; and, in his second hundred, no less than ninety-one per cent. Without counting Erb's last hundred cases, the number now reported in all amounted to five hundred and twenty-five, with an average of forty-three per cent. in syphilitic subjects. It was not proper, however, to come to any positive conclusion from such a small number of cases.

He could not agree with the other speakers that statistics ought to be ignored altogether; and yet he thought that inferences derived from them ought to be received with caution. In preparing his own cases for publication, in order to eliminate the possibility of the report being affected by any personal bias, he had submitted the records to the inspection of a gentleman who was not specially interested in the subject, and did not know for what purpose the cases were being collated, with the request that he would go over them carefully and note the various points involved. His conclusions were identical with those at which he had previously arrived. On account of the meagre number of cases, however, he did not regard them as of any special value; and the same was true, he thought, of Erb's series of cases, with their extraordinarily large percentage of syphilitic subjects. Furthermore, in regard to Erb's cases, it might perhaps not be known that this authority did not make any distinction between chancre and chancroid, which would render a modification of the conclusions reached by him necessary in the eyes of all dualists. Still, if it was proved that syphilis was associated more often with ataxia than other nervous disorders, the idea of some connection between the two affections ought not to be ignored entirely. At the same time, he felt positive that up to the present time no convincing proof had been adduced of such a connection; since syphilis was characterized by particular lesions which we know pretty well, and which were quite different from those belonging to progressive locomotor ataxia. Another point—in Erb's cases, as a rule, the syphilis had occurred a long time before the tabetic symptoms appeared, sometimes ten or twenty years. It had been pointed out that in syphilis of the cord, secondary lesions sometimes still remained after gummata and similar troubles had disappeared. Later, it might be that we should have to recognize syphilis, like sexual excess, as one of the predisposing causes which rendered the system liable to suffer from sclerosis of the posterior columns of the cord. In the consideration of this whole question it was important to separate sclerosis of the posterior columns from other troubles, since affections of the lateral columns and other adjacent parts might give rise to symptoms resembling true locomotor ataxia.

Dr. Edward L. Keyes thought that in the discussion the history, literature, and statistical aspect of ataxia had been sufficiently considered, and said that he would content himself with a few remarks derived from his own experience. In observations upon tabetic patients with syphilis, however, the statistical element could not altogether be done away with. He did not believe that pure sclerosis of the posterior columns was directly caused by syphilis; but, at the same time, he could not see why ataxia might not result indirectly from the effects of that disease on the system. In the course of his practice, he had been called upon to treat a number of ataxic patients which he could not now state positively, but which were certainly not less than two or three dozen. There was one case which he recalled particularly, in which there was a gummatous tumor of the cord, with paraplegia, wasting of the muscles of both lower extremities, and paralysis of the bladder. He became entirely well, so far as muscular weakness was concerned, but was left with all the symptoms of locomotor ataxia, which treatment entirely failed to do away with. The case terminated fatally. At present he had under his care a young gentleman who had had the ordinary manifestations of syphilis, followed by cerebral symptoms. These disappeared under treatment; but now he had commencing locomotor ataxia, for which he could assign no other cause than the syphilis. He had placed him upon pretty active treatment, but did not as yet know what would be the result. He was inclined, therefore, to attach some weight to syphilis as an active factor in the production of ataxic symptoms. Again, he had known of one or two instances in which ataxic symptoms had been distinctly relieved by antisyphilitic treatment. The means upon which he relied were large doses of iodide of potassium and mercurial inunction. It was his practice to commence with the iodide and push it to the point of tolerance. When it produced a depressing effect upon the system he remitted it, and placed the patient on tonic treatment for a time; after which he commenced the mercurial inunction, in connection with hot baths, as was done at the Hot Springs. One case that he particularly had in mind had markedly

improved under this course, though it had not been cured, and he was therefore convinced of the efficacy of specific treatment in certain cases with ataxic symptoms.

Dr. A. McLane Hamilton stated that he fully concurred in the opinions expressed by Drs. Birdsall, Taylor, Amidon, and Weber. He thought that the great trouble in this whole matter was that two totally distinct affections had been confounded with each other, viz., classic sclerosis of the posterior columns of the cord (true progressive locomotor ataxia) and cerebro-spinal syphilis. He had found that not more than twelve per cent. of patients affected with true locomotor ataxia had had syphilis; while among the irregular cases of ataxia this was true of a very much larger proportion. In this class of cases, he found enormous doses of iodide of potassium (200 or 300 grains), given in a mild alkaline water, efficient.

Dr. F. N. Otis said that he thought we could hardly afford to disregard altogether the experience of men of such eminent reputation in their special fields as Erb and Fournier, however much we might be inclined to reject statistics, as a rule. These were the two observers with the largest experience, and who had devoted the most study to this subject, considered in its twofold aspect, and we should, therefore, hesitate long before disallowing the evidence which they produced. His own experience, he said, had been small; but his knowledge of the characteristics of syphilis led him to believe that it could invade a system. If locomotor ataxia were a disease of the connective tissue, it acted in the same way as syphilis. Dr. Otis illustrated his point by a reference to the pathology of syphilitic disease of the testicle. Here there was a deposit of gummy material, so-called, which did not in reality differ at all from ordinary germinal matter, and which was capable of forming cicatricial tissue. If the affection were actively treated, the exudation might be taken up; but, if it were let alone, the mass of the testicle would become irregular in outline by the contraction of the fibrous bands formed, and these bands would continue to increase, and strangulate the tissue of the organ. After this cicatricial material began to deposit, no treatment would affect it very much, though a small portion of the testicle might perhaps be saved. In syphilis of the liver, too, there was a very remarkable development throughout of cicatricial material. It had been stated by good authorities that these lines of cicatrization followed the lymph distribution, though this had been doubted a few years ago, because in certain of the tissues, as the bones, for instance, the presence of lymphatic vessels had not then been demonstrated. As before remarked, in cases in which this cicatricial tissue had been laid down there was very little hope of accomplishing anything in the way of its removal by treatment.

Dr. Otis then went on to say that in locomotor ataxia we are ignorant of the pathological significance of the lesions found, and quoted Erb's conclusions as to the limited extent of the knowledge as yet possessed on the subject. Since the true character of the pathological process is still unknown, then, he continued, it would not perhaps be amiss to think of ataxia in connection with such a disease as syphilis, which certainly showed something of the same character in its manifestations. By many it is not regarded as a syphilitic disease because it is not affected by antisyphilitic treatment, but, as was seen in the glance which had been taken at the pathology of this disease in general, when syphilis itself reached the cicatricial stage, no benefit is to be derived from treatment. If it could be demonstrated that there were lymphatic vessels distributed through the cord, by means of which this cicatricial formation might be induced, there would be no longer any difficulty, he thought, in claiming that locomotor ataxia might be distinctly caused by syphilis.

His own personal experience, as he had intimated, is insignificant; but it might, perhaps, be of interest to relate one case that he had met with. Three years ago a gentleman had consulted him who was suffering from tabes, as it seemed to him, and this opinion was confirmed by an eminent neurologist of this city, who pronounced it a typical case of sclerosis of the posterior columns. Already he had a great deal of bladder trouble in addition to the difficulty in locomotion, and the prognosis was regarded as very unfavorable. The treatment recommended was the systematic administration of ergot, carried to as high a point as possible. Afterwards it occurred to him that the bladder trouble might perhaps be aggravated by something located about the genito-urinary apparatus, and on examination he found a contracted meatus. As the want of control of the bladder was the symptom which was the most distressing to the patient, and, indeed, made him continually unhappy, he did not hesitate thoroughly to divide the meatus, in the hope that it might perhaps have some effect, at least, in relieving this, and in the course of a week, much to his gratification, he found that the trouble had so diminished that he now had to use only one towel where eight had been required before. The ergot was continued steadily for two months, during which the urinary trouble continued to improve, but as at the end of this it began to be very badly borne, and as in the meanwhile Dr. Otis had seen the report of the researches of Erb in regard to ataxia, he determined to place the patient on the use of mercury and iodide of potassium. There was no history of syphilis, but he said he had once had a sore on his penis. When he got up to seventy drops of the saturated solution of iodide of potassium, he immediately began to improve. At the present time he is entirely free from the bladder trouble, and is much improved in his gait. In relating this case Dr. Otis said that he had not lost sight of the fact that ataxia not infrequently has its periods of quiescence and of advance. He has had three cases altogether, in which considerable benefit was apparently derived from the kind of treatment mentioned, and in two of them he found that all the urinary trouble was not dependent on the tabes.

As a result of his experience and study, therefore, he felt satisfied that no case of ataxia, if seen at a reasonably early period, should be allowed to go on without the trial of a thorough course of mercury and iodide of potassium, both drugs being carried up to the point of tolerance. In an experience of thirty years he had never yet seen a single case materially damaged by such treatment. The patient suffering from tabes was certainly entitled to the benefit of the doubt as long as there was any question about the true pathology of the disease.

Dr. Spitzka thought that the question was looked at from too narrow a point of view. One important fact all agree to, viz., that in secondary syphilis the disease

undoubtedly affects the cerebro-spinal axis. It has been shown that sometimes in secondary syphilis there is absolute loss of tendon reflex. Why, then, should this not occur in tertiary syphilis? Syphilitic meningitis does not differ at all, in his opinion, from ordinary syphilis. In the position that he had taken, Erb only expressed an extreme view in regard to what is undoubtedly true in the majority of cases. In his own experience he has found that two-thirds of his tabetic patients were syphilitics. In his female cases, however, there was no history of syphilis, but they were only three in number. The disease was apparently ascribable in one case to an attack of scarlatina, occurring after the patient had reached adult life, and in the others to cold. Statistics, as a rule, will show that, in syphilitics, ataxia occurs more frequently than almost any other affection of the nervous system. The proportion of cases in syphilitics, however, is very much the same as of cases of general paralysis of the insane. This disease has been more fully studied on account of the facilities afforded by asylums, and it has been found that the nearer such institutions are to large cities, the greater is the proportion of syphilitics among those suffering from paralytic dementia. In conclusion, Dr. Spitzka denied that tabes was a strictly systemic disease, claiming that the lesions are often found in other parts besides the posterior columns.

NEW INVENTIONS.

ON A NEW FORM OF FORCEPS FOR FACILITATING THE OPERATION OF TRACHELORRHAPHY.

By JOSEPH PRICE, M.D.,
of Philadelphia.

One of the principal difficulties in performing the operation of trachelorrhaphy successfully, is in making a denusion of the cicatricial surfaces which shall be complete and symmetrical, without impairing the integrity of the two strips of membrane which are to form the canal in the new cervix. To facilitate this portion of the operation, I have devised a pair of forceps, with the intention of using them to cover the portion left undenuded, and at the same time support and throw into prominence the portion it is desired to remove.

The forceps resemble a pair of long dressing forceps, provided with a lock of the ordinary pattern. One blade of the forceps is dilated to a flattened spoon shape, designed to fit the external surface of the cervix, whilst the other is gradually tapered so as to form a much longer and narrower blade. Each blade is furnished with a series of small teeth to fix it securely in the cervical tissues (Fig. 1).

Emmet has so fully described the operation that no subsequent author has added anything of importance to it. The operation is substantially the same as that described when using these forceps, and it is consequently unnecessary to go through its various steps. The uterus is brought down by the double wire tractor and held firmly by an assistant. The amount and shape of the denusion having been decided upon, the lips are held open, and the long blade of the forceps introduced as far as the internal os in the median line of the axis of the uterus on the lower half of the split cervix. It now covers the portion of tissue to be left undenuded. The broad blade fits the external surface of the cervix, and the forceps are locked in that position (Fig. 2). With a broad-bladed scalpel introduced flat along the back of the blade of the forceps, it is now easy to cut a thin slice of the torn tissues of one side the size and shape of the portion to be denuded, clear up into the cicatricial wedge at the angle of the tear. Reversing the knife, a similar slice is removed from the other side.

Fig. 1.

Fig. 2.

Fig. 3.

The forceps are now removed from the lower and applied to the upper gaping lip, and two similar sections made from it. The two pair of incisions should meet well back from the angle of the tear, removing as much as possible of the wedge of cicatricial tissue, included within the dotted lines (Fig. 3), since, as has been pointed out by Emmet, to its non-removal are due many failures in this operation. Four clean cuts should be made into the angle, and each pair of these should unite in a horizontal line, at a sharp angle, well back from the surface.

I have described a symmetrical bilateral laceration for the sake of clearness, recognizing that the operation would be modified in each case in actual practice by the seat and extent of the tear. In each case, however, the cervical canal would be left undenuded in precisely a similar manner. By the use of these forceps perfect coaptation of the inner portion of the denusion is a necessity, since a band of precisely similar size and shape is protected on each surface, and accidental clos-

ure of the cervical canal is rendered an impossibility. The operation is more speedy, the coaptation easier, and the resistance afforded by the broad blade fixes, to a certain extent, the yielding tissues under the knife.

In the cases in which they have been used the result has been in every way satisfactory, and I have no hesitation in recommending the plan for a more general trial.

123 NORTH ELEVENTH STREET.

NEWS ITEMS.

MUNICH.

(From our Travelling Correspondent.)

THE PATHOLOGICAL INSTITUTE IN MUNICH can scarcely be said to equal those in the other universities of Germany and Austria. The museum is rich in some things, though poor in others. It contains one preparation which certainly is unique. It is a gigantic skeleton, more than seven and a half feet high, the great peculiarity being that the individual who possessed it was of the usual size until his eighteenth year, when he began to grow, the new growth starting from a hyperostosis of the lower jaw. The bones are simply immense; they are not only very long, but more than relatively thick, and covered with osteophyte formations. It is difficult to place this specimen pathologically, whether to regard it as the result of an affection affecting a single system—here the osseous—or to regard the whole, muscles and all parts together, as a true gigantic growth depending on a congenital disposition.

In malformations the collection is relatively poor, not to be compared in this respect with the museum in Prague, the latter, having probably the richest collection in Europe. From some cause or other, Bohemia seems to produce more malformations than any other country, and here, if I recollect aright, the only successful operation on a twin monster was made. The father, a country physician, operated shortly after birth, one of the children surviving the operation.

THE LABORATORIES OF THE HYGIENIC INSTITUTE are all exceedingly well equipped, and several novel contrivances have been introduced. The director of the Institute is Prof. v. Pettenkofer, whom perhaps most of the readers of THE MEDICAL NEWS will know from the publication, in the *Popular Science Monthly*, four years ago, of translations of some of his unequalled popular lectures. One part of the institution is devoted to investigations carried out for private individuals, which investigations are paid for by the individual. The yearly appropriation for the maintenance of the institution is only eight thousand marks, this, of course, being outside of the pay of the professor and assistants, and with this they accomplish wonders. I should have mentioned that the courses here are also largely attended by architects.

BEER.—One is always astonished in Munich at the immense amount of beer that is drank there, especially when it is considered that the beer is so heavy, containing one per cent. more alcohol than most of the beer elsewhere manufactured in Germany. I doubt if people would be able to drink, with impunity, a similar amount of alcohol in any other form—that of whiskey, for example. Yet we are accustomed to think in America that whiskey is the best, purest, and most healthful form of alcohol. In most parts of Germany the beer drinking is all done at night; beyond a glass at the midday meal, few people think of drinking during the day. From the soporific effects of beer one would think it should only be drank when the labor of the day is over, and one wants to bring himself into a pleasant, sleepy frame of mind before going to bed. In Munich they take it with their breakfast, after their breakfast, and, in fact, at all times, and one cannot help thinking, when he looks upon the stalwart figures, and sees how productive they are, both physically and mentally, "What would these men be if they only drank beer at night?"

TENNESSEE STATE MEDICAL SOCIETY.—The fifty-first annual meeting of this Society will be held on April 8th, at Chattanooga.

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA will meet in Selma, on April 8th, and will continue four days.

MISSISSIPPI STATE MEDICAL ASSOCIATION.—The annual meeting of this Association will be held at West Point on the 2d, 3d, and 4th of April.

UNIVERSITY OF LOUISVILLE.—The forty-seventh annual commencement of the Medical Department of this institution was held on February 28. The degree of M.D. was conferred on eighty-four graduates.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending March 15, 1884, indicate that rheumatism has considerably increased, and that pneumonia, whooping-cough, inflammation of the kidneys, dysentery, and inflammation of the bowels have increased, and that scarlet fever has decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending March 15th, and since, at thirteen places, scarlet fever at eighteen places, and measles at five places. One case of smallpox was reported in Bath, Clinton Co., on March 15th.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 18 TO MARCH 24, 1884.

MATTHEWS, WASHINGTON, *Captain and Assistant Surgeon.*—To be relieved from duty in the Department of the Missouri, and to report in person to the Surgeon-General of the Army for duty in his office.—*Par 12, S. O. 62, A. G. O.*, March 15, 1884.

GIBSON, R. J., *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Fort Hays, Kansas, and ordered to Fort Wingate, New Mexico, for duty.—*Par. 3, S. O. 58, Headquarters Department of the Missouri*, March 18, 1884.

GANDY, CHARLES M., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort Brady, Michigan, as post surgeon. *Par. 6, S. O. 56, Headquarters Department of the East*, March 22, 1884.

CROSBY, WILLIAM D., *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Fort Hauchuca, A. T., and ordered to Fort McDonald, A. T., for duty.—*Par. 1, S. O. 20, Headquarters Department of Arizona*, March 15, 1884.

EDIE, GUY L., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort McIntosh, Texas.

ROBERTSON, REUBEN L., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort Ringgold, Texas.—*S. O. 33, Par. 3 and 4, Headquarters Department of Texas*, March 17, 2884.

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ORIGINAL LECTURES.

ON THE TREATMENT OF TYPHOID FEVER.

A Clinical Lecture.

BY PROF. DUJARDIN-BEAUMETZ,
OF PARIS.

(Concluded from page 353.)

GENTLEMEN: I pass now to the study of germicide medication. You already well know that a great number of antiseptic medicaments have become, by their therapeutic application, antipyretic medicaments; this is what has happened in the case of many substances derived from the aromatic series. It remains for me now to speak of medicaments which, while possessing an evident antiseptic action, have not, at the same time, any effect on the temperature.

It is thus that there have been successively applied to the treatment of typhoid fever, creasote by Pecholier and Morache, iodine and the iodides by Aran, Magonty, and Wilbrand; a combination of iodine and carbolic acid by Roberts Bartholow and James C. Wilson; chlorine and the hypochlorites by Chomel and Beaufort; the sulphites and hyposulphites by Polli; preparations of copper by Burq and Moricourt; mercurial preparations (the black sulphuret) by Serres; and calomel by Wunderlich and Liebermeister, also by Bartholow and Wilson in America. I shall not dwell further on these antiseptic preparations, this medication not being established on a scientific basis; for, if by the introduction of antiseptic substances it has been possible to disinfect the stools, it has been impossible to arrest the course of the disease, that is, to prevent the development and penetration of the micro-organisms into the entire economy.

Calomel, which terminates this long series of antiseptic medicines, belongs rather to the evacuant than to the parasiticide medication, and will serve as a bond of union between the two. The idea which gave rise to the evacuant medication was perfectly just, especially at the time when this medication was first instituted. In fact, we have seen De Larroque maintain since 1832 that it is in the fecal matters that the septic element of the disease is found, and that it is necessary, in order to prevent the poisoning of the entire organism, to eliminate these septic matters by stool. You have seen that experimental physiology has justified this view of the subject; only, in their haste to eliminate the peccant principle, the founders of the evacuant method have gone a little too far, and have not hesitated to give every day an ounce of castor oil or a bottle of Seidlitz water. Carried to this extreme, the purgative method is rather injurious than useful; it weakens the patient, and, by exaggerating the peristaltic movements of the diseased intestine, it may be the exciting cause of hemorrhage or of perforation. Utilized in moderation, however, the evacuant method is a serviceable adjuvant to treatment, promoting elimination of putrescent matters.

It remains for me to speak of the tonic and empirical medication. The tonic medication is now universally popular, and in order to repair the incessant losses which the organism undergoes from the exaggerated combustions which the febrile process determines, preparations of quinine have been employed, and, along with suitable alimentation, alcoholic stimulants.

I shall not repeat what I said about alimentation while on the hygienic treatment of typhoid fever, nor shall I dwell further on preparations of bark, only pointing out this fact, that the potions containing the soft extract of cinchona, which are so much administered in these cases, often pass through the alimentary canal without undergoing any modification; and in many instances I have found in the stools of my patients almost the whole of the extract which I had given them. But I must devote a little more time to a consideration of alcohol.

Since the works of Todd in England, and those of my master, Behier, in France, the use of alcohol in this fever has acquired great vogue, and I have already spoken of the advantages and disadvantages of this medication, while on the treatment of pneumonia. In typhoid fever, alcohol does not act as an antipyretic, and if you wish to lower the temperature by this agent, you will have to give such large quantities of it that the treatment will be more dangerous than useful; but, given in proper doses, alcohol acts as a tonic, and, moreover, diminishes that process of denutrition which results from exaggeration of the combustions; this is its great utility.

To those who adopt the opinions of Lallemand, Perrin, and Duroy, it is very difficult to explain this waste-restraining action, because, in their belief, alcohol does not undergo any transformation in the organism. According to the hypothesis which I have defended, and which seems to-day experimentally demonstrated, this kind of effect is quite readily explicable. I maintain, in fact, that alcohol, in presence of oxyhæmoglobin, and by virtue of the feeble bond which in this substance unites oxygen to hæmoglobin, appropriates the oxygen, and, transforming this oxyhæmoglobin to reduced hæmoglobin, modifies and arrests in a certain measure the oxidation of the tissues of the economy.

Todd, Murchison, Fourrier, and Autellet have shown us the good effects of the alcoholic medication in typhoid fever. Notwithstanding the advantageous results claimed, I do not believe that we ought, following the example of Jaccoud, to give alcohol to all our typhoid patients indiscriminately; and I believe that it is best to reserve this remedial agent for certain cases which I shall soon have occasion to describe.

By the side of alcohol we should place that triatomic alcohol known under the name of glycerine, which Semmola has administered with good effect in fevers, and which you may utilize advantageously

under the form of glycero-tartaric lemonade in your practice.[1]

I shall have finished this long series of medicaments and medications when I have spoken to you of ergot of rye, which is recommended by Duboué. Basing himself on physiological data, very ingenious but rather hypothetical, this authority advances the opinion that the typhoid virus affects particularly the muscular contractility, and especially that of the arterioles, and it is this paralysis of the vaso-motors which constitutes the essence of typhoid fever. To this want of contractility he opposes medicaments which have the property of augmenting the tone of the bloodvessels, and, in particular, ergot of rye. The trials which I have made with this treatment have not given any positive results, and I believe that if the spurred rye and its derivations are ever indicated in this disease, it is to combat the intestinal hemorrhages which so often occur.

In this therapeutic arsenal, the richness of which I have just shown you, physicians have chosen arms of various kinds, sometimes a single weapon, sometimes several, with which to fight abdominal typhus, and have thus constituted single medications and complex medications, and, according as they have applied them exclusively to all cases of dothinenteritis or as they have varied them according to circumstances, they have made thereof exclusive medications, or medications according to the indications. Lastly, another group of physicians have thought that by the unaided efforts of nature, typhoid fever ought to end in recovery, and have applied to the treatment of this disease the doctrine of expectancy. Hence we have these three systems of treatment: exclusive medication, expectancy, and medication according to indications. I cannot too much protest against exclusive medication, whether in typhoid fever or in any other disease. One patient is never just like another patient, and it is absurd to suppose that the practice of medicine can be summed up in a simple breviary, containing on the one hand the description of the disease, and on the other the therapeutic formula that will cure it. Age, sex, state of the vital forces, the symptomatic aggregate, above all the genius of the epidemic, modify the disease in its totality, and at every step in its evolution.

The science of the physician consists in modifying the treatment according to the divers circumstances, and it is from this fact that results that intimate union which I regard as so indispensable, of clinical medicine and therapeutics. Do you believe that in a case of typhoid fever the disease is the same in an infant as in an old person? Do you believe that grave cases can be assimilable to light cases? Do you believe that benign epidemics are suitable for comparison with malignant epidemics? Do you believe, in a word, that one same therapeutic formula, rigorous and uniform, can be made applicable to all cases indiscriminately, and that we can thus reduce to a same level, all forms of the disease?

I know well that the partisans of the exclusive treatment, whether single or complex, pretend to reduce all cases of the disease to one and the same type, but this is only an assumption which is not supported by the facts, and as Professor Vulpian says with so much justice, we have not as yet found a kind of treatment which is sure to modify the march of this disease and arrest its course. There are physicians who pretend to have methods which jugulate typhoid fever; but when we come to examine attentively all these so-called jugulating medications, we perceive that to obtain all the benefits which they promise, they must be applied in the first seven days of the disease, that is to say, in a period in which one is almost sure to confound simple gastro-intestinal irritation (*embarras-gastrique*) with typhoid fever. It is these same physicians who have called to the support of their doctrine of jugulation, the mild forms of typhoid fever described by Jules Guerin, and which the Germans have treated under the name of typhus-levissimus, and in which one sees the malady undergo its evolution in from twelve to fifteen days; but these are natural forms of the disease and not the result of modification by therapeutic means.

There is no such thing in existence as expectancy, properly so-called, applied as a medical or therapeutical system, for physicians who boast of employing this method take all due pains, nevertheless, to surround the patient with all the hygienic care which his situation demands, and to attend to the hygiene of your patient is not to deprive him of therapeutic aid, but to render him excellent therapeutic service. But often these hygienic attentions are insufficient, and more active intervention is required, and you must then resort *secundum artem* to the medication according to indications which I have styled armed expectancy. This expression, *armed expectancy*, has given rise to much criticism. Germain Sée has condemned it as "revolutionary." I do not consider that it has this signification, and if our interference is demanded, it is not to effect any violent changes in the economy, but to calm and regulate the disorders there going on; it is then rather as conservators than as radical innovators that we act.

But, you may ask, what are the rules of this "intervention"? On what manifestations do you depend when you decide on the advisability of more active therapeutic endeavors? These three points should guide you, Gentlemen: the intensity of the fever, the general state of the patient, the complications which arise; and, to set forth with more method these three points, we will in imagination take a case of typhoid fever, and follow it through the various phases of its evolution.

Your first care will be, as soon as you suspect typhoid fever, to surround your patient with all the hygienic precautions which I have above enumerated; you take the temperature twice a day, at precisely eight o'clock in the morning and five in the afternoon. Although the rectal temperature is always preferable to that of the axilla, the latter generally suffices. You watch carefully the abdominal functions, and you regulate the bowels by giving mild laxatives, such as saline purgatives and the natural mineral waters, which are better than castor oil. It will be well to cover the abdomen of your patient with a layer of cotton batting, which is kept applied by means of a body bandage. This application immobilizes, in a certain measure, the intestinal mass, and prevents the too sudden shocks,

[1] Semmola's formula is as follows:

R.—Glycerine, ... 3 parts (by weight).
Tartaric acid, ... 2 " "
Water, ... 500 " " —M.

To be used freely as a beverage.

which, in the present disordered state of the intestines, may do mischief. This wadding is much superior to poultices, which are inconvenient by reason of the clammy and uncomfortable moisture which attends them. Then I make my patient the subject of serious attention, being ready to act according to the rules I have just mentioned; if the temperature does not exceed 102° F.; if no complication arises, I adhere to the hygienic treatment, and those mild laxatives administered every other day, and you have many times seen in my service that these simple means are quite sufficient for benign forms of the disease.

When the temperature exceeds 102° F., I begin the practice of cold lotions (sponging), which I repeat two or three times a day, or even oftener, according to the elevation of the temperature. These means often suffice to keep the temperature in the neighborhood of 102° F. But when it exceeds 103° F., and marches towards 104° F., then is the time for my intervention with salicylic acid. I give at noon, and in the space of an hour, four capsules, each containing seven and a half grains of salicylic acid, and I take care to administer during the day a certain quantity of milk, namely, about a quart.

Under the influence of the salicylic acid there is a depression of temperature; but to render this, in a manner, permanent, I repeat my dose the next day, at the same hour; then I omit this treatment for a day or two, and note the height of the thermal curve. If it attains the previous figure, I again give the acid for two days, in the same dose; and if the temperature still tends to exceed 104° F., I double the dose, and then give sixty grains in two hours—in doses of seven and a half grains every fifteen minutes; and sometimes I go as high as seventy-five grains; but I never prolong beyond two days the action of the medicament. Such are the sole means which I employ against the pyrexia.

In order to judge of the condition of the vital forces, I am guided by the assemblage of symptoms and the state of the pulse. As long as the pulse remains between 80 and 90 a minute, I let the patient alone; when it rises above 90, I give alcohol, either in the form of Todd's mixture, milk punch containing brandy, or Spanish or Sicilian wines.

In the immense majority of cases, when the fever takes on a certain acuteness, there supervenes a nocturnal delirium of mild type; when this delirium becomes more active and boisterous, I resort to chloral, which I much prefer in these cases to opium and its derivations, which, in fact, have for their physiological effect to congest the brain; and you well understand that in ileo-typhus, in which this congestion is the rule, opiates may do harm. I administer, then, hydrate of chloral, in the dose of fifteen to forty-five grains, in a mixture of egg and milk sweetened; and I frequently associate bromide with the chloral.

A boisterous delirium often accompanies ataxic phenomena, constituting thus what was formerly described under the name of ataxo-adynamic fever. When this state is not too intense, and the fever is attended with dryness of the skin, I place my patient in a warm bath, which I repeat every day or two. If the ataxo-adynamic condition becomes more intense, I have recourse to envelopment in the wet sheet, which envelopment I repeat two or three times a day, according to the necessity. I add often in these cases to the chloral or the bromide, preparations of musk, of which Trousseau made great account, and I give from seven and a half to fifteen grains of musk, in pills rather than in potion, the latter being very disagreeable to the taste. Such are the therapeutic means which I employ in the adynamic and ataxic forms of typhoid fever, and I come now to other morbid determinations of the disease.

The pulmonary complications are the most frequent. They include bronchitis, pneumonia, broncho-pneumonia, and sometimes, though very rarely, pleurisy. In the treatment of these pulmonary complications, you should avoid the application of blisters; the patient, in fact, being in a state of constant agitation in his bed, and the functions of the skin being altered, these fly-blisters are attended with ulceration, or even gangrene, and may thus become a serious evil. You should use, instead, dry cups, which render us great service in typhoid fever with pulmonary congestion, and with these cups you may cover the whole chest of your patient. You may also give internally a little tincture of aconite, which diminishes, though feebly, this congestive tendency. It will be well also to have your patients well propped up in their beds, so as to prevent those hypostatic congestions which too horizontal a position determines.

I have but little to say about the cardiac complications, at least from the point of view of treatment. Here we have, unhappily, one of the causes of sudden death in typhoid fever, not easily explicable always, whether we suppose, as Dieulafoy does, a simple reflex action, whether we attribute the fatality, as does Hayem, to symptomatic myositis, or whether we make it depend, according to Laveran and Bussard, on cerebral anæmia, or whether it results from these last two causes combined, as Huchard maintains. Our therapeutics, in fact, have very little power to prevent such a termination. I agree, at the same time, with Huchard, that tonics, general stimulants, and perhaps nitrite of amyl, may in these cases render some little service.

On the part of the digestive tube there may supervene several complications. One of these consists in the appearance of gastric troubles, and I have already spoken to you of them while on the subject of diet in this disease; the other is an accident much graver and always mortal, namely, perforation of the bowels; lastly, the third results from the occurrence of intestinal hemorrhages. I have little to say to you from a therapeutic point of view concerning intestinal perforations, yet apart from perforations as a determining cause, peritonitis has been sometimes observed in typhoid patients. In these cases there is a possibility of a recovery by a rigorous treatment, which consists in the application of ice to the abdomen, and immobilization of the intestinal mass. As for intestinal hemorrhages, we have seen that when they are of moderate intensity they are often rather beneficial than otherwise; unhappily it often occurs that they are too abundant, and we are called upon to interfere with applications of ice to the abdomen, and the internal administration of perchloride of iron or ergotine. For my part I very much prefer ergotine or ergotinine, which I give in hypodermic injections. I have thus far omitted to say anything about the diarrhœa. While recognizing the fact that a typhoid patient ought to have two or three movements a day,

there are cases when the passages are altogether too frequent, and exhaust the patient. I advise you in these cases to make use of the salicylate of bismuth, in doses of from forty to sixty grains a day.

The renal complications present a certain gravity in typhoid fever. Fothergill even thinks that it is the non-elimination of the products of combustion which is the point of departure of the typhoid state. The kidney, in fact, is congested in typhoid fever, and the urine is albuminous. Whether we are concerned with an infectious nephritis, as Bouchard thinks, or with a congestive nephritis, there none the less results a perturbation in the functions of the renal organ, and I have already spoken to you of the important part which I assign to this perturbation in explaining the toxic action of certain medicaments in typhoid patients. It is necessary, then, to favor the functions of urination, and you can accomplish this by giving abundant drinks to your patients, and one of the best is certainly milk. I share, in this regard, the view of Jaccoud, who thinks it a good thing to give to his fever patients one or two quarts of milk a day.

The skin, as you know, may become the seat of mortifications more or less deep (bed-sores); these eschars are sometimes of great gravity, extending so far as to expose the bones of the pelvis. I have even observed myelitis consecutive to the opening of the vertebral canal in typhoid patients. I have already shown you by what hygienic means you may avert these mortifications of the skin, but when despite your care they appear, you will require a special dressing for them. The best in my opinion is a solution of chloral. It was in a case of gangrenous ulceration of the hip of great extent, in a young typhoid female, that I made the first local application of chloral, and the astonishing results which I obtained from this outward medication encouraged me to study and make known the antiseptic properties of chloral, and this work of mine has served as a basis for the local therapeutic employ of chloral, to-day so much in vogue.

You make, with one per cent. solutions of chloral, frequently repeated dressings, and you have care especially to introduce into the excavation which results from the mortification of the tissues, wadding or lint soaked in this solution.

Apart from these eschars I ought to mention erysipelas of an infectious kind, and for that very reason of extraordinary gravity; phlegmons, accidents quite common in typhoid fever of a subinflammatory character, deeply hidden in the interstices of the tissues, and the possibility of which ought to make you examine, with the most scrupulous attention, the painful points of which typhoid patients sometimes complain during their convalescence. You well understand that these purulent collections should be thoroughly drained and treated by antiseptic washings and injections.

Such are, Gentlemen, the principal complications which you will have to meet; there are still others of which I shall not speak, for they are exceptional; such as gangrene of the limbs, œdema of the glottis resulting from laryngo-typhus, suppurative parotitis, but it is very rarely that you will have occasion to treat these complications.

I shall say but little of the convalescence of typhoid fever; remarking at the same time that relapses are frequent in this disease, and especially that variety of remittent or intermittent fever which accompanies convalescence from typhoid fever; a variety which David Borelli has plausibly explained by the presence of intestinal ulcerations slow to cicatrize. The entire therapeutics of convalescence is summed up in a problem of alimentation, and you should employ all your care and skill in directing aright the diet.

Such is the aggregate of therapeutic means which you ought to employ in typhoid fever; in putting them in practice you will succeed in curing the great majority of your cases, and without admitting with certain physicians that it is possible, by therapeutic means, to cause the mortality of typhoid fever to disappear, I am of the opinion that there is no disease in which the successes won by therapeutics are more numerous.

It is in following step by step the disease whose evolution he has mastered, that the physician by his earnest and thoughtful care and his attention to little points, by his energetic intervention when complications appear, may in many cases say that he has saved the life of his patient, and to express briefly my thought, I might conclude with this phrase, which, although a solecism, is the truth—"The best treatment of typhoid fever is a good physician."

ORIGINAL ARTICLES.

TWO CASES OF RUPTURE OF THE UTERUS;

AND SOME REFLECTIONS UPON THE ABUSE OF ERGOT IN OBSTETRIC PRACTICE.

BY GEORGE J. ENGELMANN, M.D.,
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RUPTURE of the uterus—one of the most fatal, but fortunately also one of the most rare, of all the dangerous accidents attending parturition—is so seldom met with that every well-observed case should be put upon record. This occurrence, fatal in almost every instance (in at least ninety-five per cent. of the cases recorded), is only too often due to a want of vigilance, to tardy interference, sometimes to ill-timed and ill-advised interference, on the part of the accoucheur. In many regions of England and the continent of Europe, where pelvic deformities abound, rupture of the uterus may result from these causes—healthy labor pains, a healthy child, and a narrow outlet; sometimes the uterine tissue is lacerated by pressure of the contracting muscle against bony projections of a diseased pelvis. In this country, however, especially in the Western States, I may almost say throughout the entire land, with the exception of those great cities which are centres of poverty and misery, as well as of wealth and luxury, a deformed pelvis is almost unknown to the obstetrician. But, unfortunately, where by a healthy development of the female frame we are freed from the main cause of this terrible dystocia, a cause sufficient for its occurrence is offered by the physician himself, and the most frequent source of uterine rupture can safely be said to lie in meddlesome midwifery of the worst kind—in the abuse of ergot.

Much is said in condemnation of meddlesome

midwifery as applied to early operative interference, to version, or to the use of the obstetric forceps; but meddlesome midwifery of a far more dangerous kind, because less evident and more common, has to a great extent escaped criticism; this is the liberal use of ergot in obstetric practice. What the forceps are to the skilled obstetrician, ergot is to the unthinking practitioner and the midwife. Aye, more, it supplies the place of every other remedy—of patience as well as the skilled hand. Ergot, I regret to say, seems to be the all-powerful and the only agent in use in the obstetric practice of but too many; and so much more injury than good is done by this drug, so potent for good or evil, that I would condemn its use in obstetric practice altogether. Parturient women would be better off if ergot was stricken from the pharmacopœia: it is never necessary, and where really needed cannot be relied upon for immediate action, so that other means must be resorted to. It does good service in its proper place, if given after the contents of the uterus have been expelled—to prevent hemorrhage, and to stimulate contraction when labor is completed, especially after the physician has left his patient. Where really needed, in cases of hemorrhage, in which the uterine fibres refuse to act, the drug cannot be relied upon; the stomach, in that enfeebled condition of the system, refuses to absorb it, and, if absorbed, its action is slow and insufficient. We must use more effective means. Hence, in extreme cases, in which uterine contractions are demanded, it is useless; and in cases in which it does answer the desired purpose, we have a choice of other means more satisfactory, and less injurious. A vast deal of injury to women in labor would be avoided—in confinement at term as well as in abortion—were this dangerous drug ostracized.

None will deny that in extreme cases—in cases of post-partum hemorrhage, for instance—more energetic means for stimulating uterine contractions are demanded; and even in milder cases we also have less harmful and more effective means. If we are doubtful of sufficient uterine contraction after the expulsion of the placenta, friction or kneading of the fundus, quinine, or injections of hot carbolized water—vaginal or uterine—will by far better answer the purpose. A vaginal injection of hot carbolized water after expulsion of the placenta is stimulating, cleansing, and advantageous in many ways. Like ergot, it hastens the contraction, and, beyond that, cleanses and lessens the danger of infection. During labor, ergot should rarely be used; for safety's sake, I should say, never. Although the injury done by the drug is not often severe—it maims oftener than it kills—it is all the worse for its frequency, and, not being so palpable, has escaped notice and condemnation to a great extent. The use of this drug during labor is a widespread evil; the authorities always call attention to ergot as a powerful oxytocic, and, though they limit its use, do not sufficiently warn us of the terrible dangers which accompany it, and the practitioner is more or less given the impression that it—ergot—is the most necessary aid to the accoucheur: this illusion must be dispelled, and I will here show how serious may be the evil consequences of giving the drug during labor.[1] The authorities claim that in by far the greater number of cases of rupture of the uterus, the cause may be sought in the use or abuse of ergot; and in order to demonstrate clearly the injurious effect of that drug, I shall relate the two that have come under my own observation.

Although each possesses features of interest in itself, I look upon these terrible cases of death of mother and child, the sudden taking away of strong, healthy women in the midst of the parturient process, as the most striking demonstration possible of the dangerous abuse of ergot.

Case I.—A healthy negro woman, some twenty-six years of age, who had borne two children at term without unusual suffering was about being confined with her third; the waters had broken and labor was progressing, but apparently not to the full satisfaction of the impatient attendant, whether physician or midwife I do not recollect, and ergot was given. The pains came more rapidly and with increasing severity; and, as the story of those present is, the patient, in the agonies of intense labor-pains, suddenly cried out, suffering from a pain more severe than any preceding; she fell back, apparently in great distress, labor-pains completely ceased, and she sank rapidly with great suffering. The attendant having left, a physician was sent for, who found the patient in a state of collapse, death soon following.

It was my good fortune, by the kind permission of the Coroner, Dr. Auler, to make the post-mortem examination. The abdomen being opened, I found the fœtus involved in large masses of clotted blood in the lower left portion of the abdominal cavity; the uterus was flabby, partially contracted, containing the somewhat adherent placenta and large clots of blood. The laceration extended from the central portion of the cervical juncture, perhaps a little to the left, through the lateral portion of the body into the upper third. The pelvis was normal, with the exception of a bony protuberance near the ischio-pubic juncture upon the brim; but whether the rupture was in any way furthered by pressure of the tense muscles against this exostosis, I am unwilling to say. The child was of moderate size, if anything, below the average; the os was partially dilated, yielding readily. To my mind, the fatal result must mainly, if not altogether, be ascribed to the hyperactivity of the muscles, over-stimulated by ergot.

Case II. was that of a lady, aged twenty-five, married four years, with a fine frame and an un-

[1] I have been of late so thoroughly impressed with the necessity of limiting the prevalent use of ergot, on account of the many resulting evils, to which my attention was first directed by these fatal cases, that I was induced to read a paper upon the use and abuse of ergot at the late meeting of the American Gynecological Society. Being in hopes that if other—more effective and harmless—means for stimulating uterine contractions were more generally introduced, ergot would be more readily given up than by merely pointing out the dangers of its use, I have supplemented this by a paper read before the St. Louis Obstetrical and Gynecological Society, on the use of external manipulation in obstetric practice; for it is mainly by the proper *management* of labor—by *patience*, by *posture* of the patient, and by *external manipulation*, that we can safely accomplish what ergot was *supposed* to accomplish in labor.

usually healthy, vigorous constitution. She was delivered three years ago of her first child in a normal labor with good getting up, and passed through her pregnancy without unusual symptoms, being in the best of health. Uterine pain began during the day; at 10 P.M. the midwife arrived, the pains continuing with moderate regularity. She remained during the night, but left on the following morning, returning toward evening. The pains continued with increasing severity, the midwife remaining throughout the night and also upon the following day, the third; as the labor seemed to be unnecessarily delayed, under favorable circumstances, with the patient in excellent condition, a physician was sent for, who arrived at 6 P.M. He pronounced her condition good, and at once ordered ergot. He informs me that he found the os dilated, but the parts rigid and dry, and that the arm came down at half-past nine. The ergot arrived at 7 P.M. One drachm was given, and in thirty minutes a second; a few minutes later a third (soon after giving this third dose the attending physician upon examination informed the friends that the child was not in the right position, that an arm was presenting). Having placed the patient under chloroform at 10 P.M., he attempted an interference, but failing, sent for a consultant, who was unable to accomplish more, though desisting only after persistent efforts continued during the space of an hour. A second consultant was then sent for, as the case appeared a desperate one. Arriving at 2 A.M. on the morning of the fourth day, he, too, attempted to turn the unusually large child in the now firmly contracted uterus, but with no more success than his predecessors. After the previous attendants had again attempted to interfere, but with no better success, the patient was left at three o'clock in the morning, with instructions to refill the bottle of ergot and continue its use, as the labor-pains seemed to have ceased. Between two and three o'clock she suddenly felt a sharp pain, and cried out with suffering, complaining at the same time of the excessive motion of the child; after this, however, all was quiet; the physicians had left with instructions to continue the medicine, and neither labor-pains nor motion of the child was again felt, the patient remaining very quiet for the balance of the night.

I was summoned on the morning of the fourth day, in great haste, with a request to "bring my instruments to cut up a child as it couldn't be delivered," and reached the patient at 10 A.M. I found her a healthy, strong, young woman, partially sitting up in bed, semirecumbent, supported by both arms, apparently none the worse for all she had undergone during the three days of this protracted labor. The peculiar position, and the anxious care with which she seemed to preserve it, guarding herself against even the slightest change, struck me at once. Equally remarkable was the shape of the abdomen, which was peculiar, presenting a well-defined prominence, bulging out directly beneath the rib under the region of the heart in the left side. Her pulse was excellent, quite strong, and regular. The lucid statement of the attending physician, who had arrived at the same time, the history briefly gathered, her excellent condition, the immense discolored arm which hung limp in the vagina—all led me to infer that it was merely a question of turning an unusually large child, and I expected nothing worse. Heeding but little the peculiar prominent mass in the epigastrium, I was simply puzzled by the distinctness with which she made the statement that early in the morning, at 2.30 A.M., the child gave a sudden jump, which made her cry out with pain and say that she wished that it would not move so violently, whilst the discolored arm seemed to point to the death of the fœtus at a much earlier period.

Although every movement caused her great pain and could be accomplished but slowly, I at once placed the patient in the proper position, in the dorsal decubitus, upon the edge of the bed. Her pulse, which had become somewhat rapid under the excitement, soon recovered, when the chloroform had taken effect. I found a third shoulder presentation; the right arm in the vagina, the parts excessively dry and tense, the uterus spasmodically contracted and not in the least relaxed by the chloroform, so that it was with difficulty that I could move my hand in the cavity. The child was of enormous size, my hand would not pass beyond the abdomen, nor was I enabled to move any of the parts in the least. The conditions did not seem improved after disarticulation of the presenting arm. The attending physician introduced his hand, after mine became completely tired out, with no better result; after another effort I was enabled to bring down what I supposed by its size to be a leg, but found it to be the left arm, which I also disarticulated. Still unable to accomplish more, I attempted eventration, gaining but little on account of the tetanic contraction of the parts. I was greatly puzzled at not being able to find any portion of the lower extremities, which in this position should have been in front quite near the os; as far as I was able to move my hand within the rigidly contracted uterus I could find nothing but the monstrous body of the child, and began to suppose some deformity of the fœtus, until I was enabled to reach the hips, but these were closely constricted by a ring of uterine tissue. I now suspected the true condition of affairs—a rupture of the uterus, the hips within the opening, the breach forming the bulging prominence within the abdominal cavity directly beneath the ribs.

Seeing no relaxation of the tissue, I informed the relatives of the condition of affairs and the urgency of decisive interference. Consent was at once given to any measures that might appear necessary, and although having only my pocket-case at hand, I made the necessary preparations to open the abdominal cavity and extract the child. Before, however, taking this step, which seemed a hazardous one with this slender apparatus, especially without properly prepared sponges, I determined to make one more effort at version, and succeeded in passing my hand along the hips of the child, through the constricting ring into the abdominal cavity, and was enabled to seize one foot, which I found directly beneath the diaphragm. Version and extraction

were rapidly accomplished, the attending physician greatly aiding by grasping and following down the uterine fundus; with the assistance of friction and cold water the womb fairly contracted, and I at once delivered the placenta, and then mopped the uterine cavity, first with hot water, and then with perchloride of iron. There was no loss of blood, and the uterus contracted into a firm and hard, although very large, globe. Child and placenta were both of enormous size, and in beginning decomposition. The patient was brought to bed; brandy was given by subcutaneous injection; the pulse, which had become very rapid and feeble toward the last, seemed to revive a little, and she recovered consciousness. Not a drop of blood was lost; the uterus remained contracted in a firm, hard, and enormously large globe. But notwithstanding the apparently favorable conditions, the pulse became very rapid and feeble, the patient sank, and died quietly within two hours after delivery.

In considering these cases, it will be seen that the first is a typical example of rupture of the uterus; the patient being seized suddenly with an intense pain, the symptoms of internal hemorrhage, shock, and collapse following; the child expelled into the uterine cavity involved in the clots consequent upon internal hemorrhage.

The second, however, is remarkable in so far that the rupture, which was well characterized, did not result in any such consequences for the time being. The patient lived ten hours after the occurrence of the rupture, and the fœtus, at least so far as the presenting parts were concerned, did not change position. The pulse gave no indication of shock or hemorrhage, nor was any hemorrhage visible. This peculiar condition is readily explained by the unusual size of the child: the huge trunk remained within the uterus, the head upon the right ilium, the breach beneath the diaphragm and abdominal wall in the abdominal cavity, so that this immense mass was firmly wedged in and tightly held within the firm contractions of an unusually powerful uterine muscle, which, in the lacerated portion, seemed to encircle the breech of the child as with a band of steel. The laceration was in the upper third of the left side toward the fundus. Another striking feature, to me at least, was the firm and permanent contraction, both before and after expulsion; the free use of ergot might have produced the former, hot water and perchloride of iron the latter.

Whatever of interest these two cases may have as cases of rupture of the uterus, both seem to me a terrible warning of the dangers of ergot in obstetric practice. In the first case nature, and if not nature, certainly the obstetric forceps, would readily have completed delivery without the slightest difficulty, had the uterus not been over-stimulated by the dangerous drug. In the second, delivery was impossible by the forces of nature, and the powerful muscle of an unusually strong body was driven to enormous exertions, until it grasped in tetanic contraction the immense mass of the unusually large ovum, preventing any rectification of position, and, unable to expel the mass by its proper outlet, it gave way in the effort.

One word with regard to the final management of these cases. Notwithstanding the absence of all symptoms of hemorrhage, and the apparently perfect contraction of the uterus, a certain amount of blood and amniotic fluid must have escaped into the abdominal cavity, and, as a rule, a large quantity accumulates there, hence it is best to remove this; whether the child be delivered per vaginam or by abdominal section, the opening of the abdomen affords the patient a better chance of recovery, as hemorrhage can then be stopped, the lacerated surfaces of the uterine muscle properly united, and, above all, the abdominal cavity cleansed. This treatment was not here resorted to because the necessary apparatus was not at hand, not even within reach, and the patient was rapidly sinking from the shock received.

Of the lesser and more frequent evils which result from the use of ergot we hear but little, yet they are many; extreme cases, fortunately, are rare, but, not being reported, possibly are more frequent than is generally supposed.

Of all the milder, more harmless, and yet effective stimulants to uterine contraction, I would, if a medicine is to be given, mainly urge quinine, which is always a valuable aid to the parturient process in this climate; for the purpose of altering painful and ineffective labor-pains we have in opium and ipecac, especially in Dover's powders, a by far better and more natural means than in ergot; and for the purpose of furthering post-partum contractions, the one legitimate use of ergot to which I would see it limited, massage of the uterus and hot-water vaginal injections are equally effective, more rapid, and preferable; the douche, when combined with carbolic acid, permanganate of potash, or other disinfectants, guards us at the same time from an even far greater danger. These means are always on hand, and why should we not resort to them in ordinary cases?

When necessity urges, as in case of post-partum hemorrhage, ergot certainly is useless, even dangerous, and cannot be relied upon: the stomach may not assimilate it, and, even should it do so, the action is slow, and only subcutaneous injections may be of use, whilst intrauterine injections of hot carbolized water, external manipulation, massage, or astringents—vinegar, alum, and above all perchloride of iron—within the uterine cavity, act immediately and effectively; friction of the surface, massage, and the hot vaginal douche will serve well before delivery is completed. Later, after expulsion of the ovum, and if more vigorous measures are necessary, we can rely upon intrauterine injections and the use of astringents within the cavity.

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THE TREATMENT OF TYPHOID FEVER.

By GEORGE L. PEABODY, M.D.,

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(Concluded from page 360.)

The introduction of the antipyretic use of cold water has been traced by Lauder Brunton to the time of Augustus, whose life Musa saved by its

means. The systematic application of cold affusions to the body to reduce the temperature of fever patients, together with accurate thermometric investigations, seems to have been first practised by John Currie in 1797. This method seems to have been much resorted to in the first half of the present century in England, Egypt, Russia, and Germany, but it seems to have subsequently disappeared from therapeutic procedures, and to have been again revived by Dr. Brand,[1] of Stettin. He has applied this treatment to a large number of cases, and has collected statistics of eight thousand cases thus treated; and he counts among his followers Liebermeister, Bartels, Immermann, Niemeyer, Ziemssen, Jurgensen, and many others.

During the twenty years 1848–67, 2228 cases of typhoid fever were admitted into the Charité in Berlin; of these 405 died, which was a rate of mortality of 18 per cent. The antipyretic treatment was then introduced, and during the nine years 1868–76, 2086 cases were admitted, and 267 died, giving a mortality rate of 13 per cent. We are told that of these cases 64 were admitted in a condition not admitting of the treatment, and that if they be deducted from the list, the mortality would be only 10.5 per cent. In the Prussian army, during the seven years from 1868–74, the rate of mortality from typhoid fever was 15 per cent. The antipyretic treatment, chiefly in the form of cold bathing, was then introduced, and during the next seven years the mortality rate fell to 9.7 per cent.

At the meeting of the Academy of the Sciences in Paris on February 26, 1883, Dumontpallier finished a contribution to the study of the subject of refrigeration of the human body in fevers, especially in typhoid fever, with these among his conclusions: "That the treatment by refrigeration in typhoid fever judiciously conducted affords great advantages in the therapeutics of that disease. One cannot pretend to cure all patients, but I have the firm conviction that in thus modifying the high temperature this method can lessen the mortality to a very considerable extent."

During the year 1883 this subject was very frequently under discussion in the Academy of Medicine in Paris. Much of the discussion has been interesting and instructive, and much discursive and personal; and it may be supposed that the method by cold baths, being a German method, has not been adopted with alacrity by the French. On the 15th of March, 1883, Ricklin gave statistics of results in German hospitals by this method, which serve to justify our faith in it, when we consider that they have been subjected to a rigid scrutiny by "the hereditary enemy." According to this writer, in the Bethanie Hospital, in Berlin, during the fourteen years from 1868 to 1881, 3140 cases were treated, with a mortality between 13 and 14 per cent. In the hospital in Munich, from 1868 to 1875, Ziemssen treated 2223 cases, with a mortality of 205, or 9.2 per cent.; and Zaubzer, with 206 cases, lost only 8.8 per cent. These two observers treated their patients systematically with cold baths.

Jaccoud, at a session of the Academy on February 6, 1883, recounted his method of treating this disease, which consists in the administration of from 30 to 80 grammes of alcohol a day in teaspoonful doses, with 3 or 4 grammes of extract of cinchona, and, in addition to this, sponge baths of vinegar or aromatic vinegar and water four, six, eight, or ten times a day, in accordance with the temperature. In certain cases in which this treatment fails to reduce the temperature, he gives from 1.5 to 2 grammes of bromohydrate of quinine or salicylic acid every other day. He thinks he has thus produced an amelioration of nearly all the graver symptoms of the disease. During the past sixteen years he has treated 655 patients after this manner, with a mortality of 10.83 per cent. He has collected 80,140 cases, treated on the expectant plan, with a mortality of 19.23 per cent.

Dr. Frantz Glénard, writing last year in the *Gaz. hebd. de Méd. et de Chir.*, and also in the *Lyon Méd.*, gives briefly the results obtained in Germany and in Lyons by the method of Brand. His conclusions were adopted almost unanimously by the hospital physicians of Lyons—twenty-two out of twenty-four being in their favor.

They are briefly recapitulated thus:

The method of treatment which exercises the most favorable influence over the progress and termination of typhoid fever is that which has for its foundation refrigeration by cold water and continual feeding of the patient from the beginning to the end of the disease. The therapeutic procedure which responds best to the former of these indications is the use of repeated cold full baths, with cold compresses in the intervals between the baths.

Typhoid fever treated methodically, and from a period soon after its commencement, assumes an encouraging character during its entire course, and the duration of convalescence is considerably shortened. Complications are rare under these conditions, and there are no grave consequences, either immediate or remote, which can be directly imputed to this method. If one begins this treatment after the disease is under full headway, instead of at its commencement, so that the endeavor is made rather to combat complications than to prevent them, the results, though not so marked as if the method were early adopted, are still better than those given by any other mode of therapeutics.

Consequently, the physicians of the hospitals of Lyons declare themselves partisans of Brand's method of the treatment of typhoid fever, with the conviction that this method regularly applied, especially from the beginning of the disease, has considerably lessened the percentage of mortality.

Glénard then goes on to quote statistics from the German army with which we are already familiar, and to place side by side the statistics of results obtained in the German army, on the one hand, and in the French army on the other, and to draw from this comparison a new argument in favor of cold baths. "We have," he writes, "as a means of drawing conclusions in regard to this method, the

[1] Not having had access to Brand's book I have been obliged to accept statistics and other matters derived originally from him, as they appear in Cayley's lectures and in the writings of others.

results of twenty years in Germany, and of ten years in the hospitals of Lyons. Since its adoption the mortality in both has fallen from 26 per cent. to 9 per cent.; and in some of the German hospitals, and in private practice in Stettin and Lyons, it has fallen to 1 or 2 per cent.

"One is justified in saying," he continues, "that the rate of mortality in typhoid fever treated by cold baths depends upon the strictness with which the method is applied, and that it can consequently be indefinitely reduced.

"Under the expectant method the mortality depends solely upon the severity of the epidemic; it depends upon the disease, and not upon the doctor."

This sanction of the German method, almost unanimously adopted by hospital physicians of so large, and wealthy, and intelligent a city as Lyons, and that, too, under the well-recognized circumstances of existing antipathy to things German on the part of the French, is certainly sincere, and should command our earnest attention.

I do not wish to be understood to imply that all the writers in current medical literature are in favor of Brand's method; but I do believe that a careful comparison of them all will lead an unbiased reader to believe that the most exact and careful observers are, as a rule, strongly in its favor.

In the hospital at Basle, where a mortality of 27.3 per cent. occurred in 1718 cases treated on the expectant plan, in 1483 cases treated on the antipyretic system they had a mortality of 8.8 per cent.

In the hospital at Kiel, 330 patients treated on the expectant plan gave a mortality of 15.4 per cent.; 160 cases treated by Jurgensen on the antipyretic plan gave a mortality of 5.1 per cent.

In the Military Hospital of Stettin, 1591 cases treated on the expectant plan gave a mortality of 25.6 per cent; of 121 cases treated in the same hospital antipyretically, all recovered except 5, giving thus a mortality of about 4 per cent.

The general results, as given by Dr. Brand, show that of 8141 cases treated antipyretically, 600 have died, giving thus a mortality of 7.4 per cent. To crown all, Dr. Brand has treated 211 successive cases in private practice without a single death and without the occurrence of peritonitis or perforation. Let us remember that these were not selected cases, but that they occurred consecutively in the practice of a single individual.

After comparing these results with those that I have already given, can anyone doubt the efficacy of cold water in the treatment of this disease? In time of peace, during the year following the civil war in this country, 1285 cases of typhoid fever occurred in our army, with 635 deaths, showing a mortality of something over 49 per cent. It seems to me that we should no longer hesitate to adopt this treatment as a routine method of combating the most dangerous symptom of this grave disease.

It is not generally adopted in this country, or even in this city, and I fear its general use will be long postponed, notwithstanding all these facts. The community is prejudiced against it, and we doctors have first to undertake the task of educating the community to its use. How often have I heard doctors condemn it as an unsafe and violent procedure, who had never once seen it systematically tried. Like tracheotomy, it is mildly suggested by a timid doctor, as a possibility of saving a moribund patient, and, like tracheotomy, failing to restore life to a dead man, it has fallen into disrepute. How many hospitals in this city are properly equipped with portable bath-tubs that can be of service for this purpose, and how many hospital physicians among us have seen systematically made use of them?

Cold water is variously applied: in the cold bath, cold affusion, cold pack, cold compresses, and the graduated bath, which consists of a warm bath gradually cooled down after the patient has been placed in it. Each of these methods is adapted to some cases, and each of them has its special advocates, but there is little doubt that, for general use, the cold bath is by far the best.

According to Brand, whenever the patient's temperature exceeds 102.2°, he should be put into the bath, the temperature being taken in the rectum. The temperature of the water is between 65° and 70°. Usually this will be well borne for ten or fifteen minutes, and it should ordinarily not be discontinued until a distinct shivering has begun, its effect on the pulse, meanwhile, being carefully watched. The temperature continues usually to fall for some time after the patient has been removed from the bath. The frequency with which the bath must be repeated will vary with individuals, but it should always be resorted to when the temperature reaches 102.2°.

My own experience with this method is so insignificant, as compared with the statistics collected by Brand, that it seems hardly worth while to do more than allude to it. About three years ago the New York Hospital had a bath-tub constructed for me, on wheels with rubber tires, so that it could be brought noiselessly to the bedside for use when required. It requires the services of two able-bodied attendants properly to administer a bath. The water need not, of course, be changed for every bath. I can only say that I have employed the method in a small number of cases, and am quite satisfied with the results obtained in this way. Not only is the fever thus reduced, but many of the graver symptoms are ameliorated, such as stupor, insomnia, delirium, feebleness of the heart's action with its pulmonary sequences, bedsores, and meteorism; and the mortality is unquestionably reduced, as the statistics which I have quoted show.

I have seen a general pulmonary œdema disappear almost as if by magic, under persistent application of cold water. It seems to have no influence, either for good or evil, over the occurrence of intestinal hemorrhage and perforation, and though we are forced to admit that its use is followed by a greater tendency to relapse, still relapses, as a rule, are of small consequence as compared with the many advantages of the method.

The temperature of the body is then markedly reduced; more in light cases than in severe ones; rather more markedly late in the disease than early. The fall in temperature begins when the patient is

removed from the bath, and continues more and more marked for an hour or two, when it again begins to rise, and may reach a height, in the earlier period of the disease, somewhat above that at which it was before the bath. In the later stages this is unusual. The frequency of the pulse is often diminished as much as twenty beats in the minute.

Under this treatment, the acidity of the urine is diminished, this sometimes even becoming alkaline, and often the solid ingredients of the urine are diminished, this indicating a diminished destruction of the albuminous tissues. Albuminuria becomes less frequent. From theoretical reasoning, it would seem unquestionable that such changes must have a good influence on the course of the disease. The excitement of the nervous centres being thus temporarily calmed, they are thus susceptible of a normal or nearly normal nutrition, the danger of collapse being thus materially lessened.

The practical proof which is given by the statistics of results under different methods of treatment seems quite in accord with these theoretical deductions.

The effect of high temperature is very deleterious upon normal tissues, and its influence is distinctly evil in reference to the possible healing of intestinal ulcers. Every surgeon knows that wounds are apt to act badly under the influence of fever, and it would seem to need no further argument than this to induce us to produce these artificial remissions of fever.

Whether to use the cold bath for a few minutes, the tepid bath or the graduated bath for a longer time, or the wet pack or cold sponging, or Leiter's tubes, which form the latest modification of the antipyretic method, are questions which the circumstances surrounding each case must enable us to decide. Enough has been said and written of late years about the technique of cold bathing. This must be made to vary with different cases; but one thing seems certain with regard to that modification of the plan which is most common here, namely, that cold sponging is in many cases wholly inefficient in the reduction of temperature.

Many lives have been lost by a timid temporizing with this modification, the physician lulling his conscience to sleep with the thought that he is resorting to a useful procedure, and the friends of the patient being content that much is being done to save him, his temperature meanwhile not falling appreciably under its use. My experience with Leiter's tube or coil is more unsatisfactory in this disease than with cold sponging.

It is not claimed that all cases can be safely or properly subjected to prolonged cold bathing. As contra-indications, may be mentioned intestinal hemorrhage, or perforation, or peritonitis; aphonia from ulceration of the larynx, which may threaten œdema of the glottis; marked degrees of heart weakness, in which the internal temperature is high, with cool extremities, pulse and heart impulse being very weak; also, venous congestion from chronic bronchitis, emphysema, and heart disease.

Menstruation and pregnancy are not contra-indications.

Besides these classes of cases, experience shows that certain patients, chiefly women, do not stand cold applications well, and in such cases the treatment after trial is not to be persisted in; but it is my belief that these cases are not common.

Of the use of antipyretic drugs in doses sufficient to reduce the temperature I am not an advocate, and I fail to interpret correctly the therapeutic indications of the times if they are not being less and less frequently resorted to. One cannot give large and frequently repeated doses of quinine, salicylic acid, or kairin without incurring the risk of seriously disturbing important functions. The use of carbolic acid in this disease is occasionally attended by very unpleasant consequences, and the results obtained by it do not seem to warrant us in continuing its administration either hypodermically or otherwise.

And now, Mr. President, having trespassed so long upon the time of the Society, I will not venture further to detain you by dwelling upon the various complications that may require treatment. I feel sure that you are waiting impatiently for those who are to follow me, and I will, therefore, content myself with merely calling attention to some of the important symptoms that require attention. These are nervous irritability, insomnia, headache, retention of urine, diarrhœa, perforation, peritonitis, tympanites, constipation, bronchitis; and I will close with the remark that those of us who habitually resort to the antipyretic method are rarely called upon to treat most of these complications, for it is well recognized that in patients thus treated but few of these symptoms habitually occur.

PROLAPSUS OF THE URETHRA.

BY R. H. DAY, M.D.,
OF BATON ROUGE, LA.

IN the report of my case of prolapsus of the urethra, published in THE MEDICAL NEWS of December 1, 1883, I stated that I had a second case under treatment, which I would keep under observation, and report the result.

This second case was brought to me about two weeks subsequently to the first. The patient, also a colored child, only fifteen months old, otherwise healthy, had a small prolapsus of the urethra, about the diameter of a nickel, slightly compressed laterally by the labia, making it somewhat elongated from above downward.

The mother stated that she had observed this protrusion for the past three or four months, and that it was slowly increasing in size. It presented all the physical appearances of the first case, except that it was much smaller.

The patient being quite young and in good health, and the prolapsus not causing much inconvenience, I determined to try to effect a cure without resorting to an operation. I accordingly commenced with acetate of lead, sulphate of zinc, and tincture of opium in aqueous solution, with which the tumor was directed to be sponged several times a day, and a pledget of cotton-lint wet with it applied in the interim. This was kept up for a week, and finding

but slight, if any, diminution in the size of the tumor, I changed my prescription to tannic acid dissolved in glycerine, to be kept applied on cotton-lint to the part. This acted favorably; the vascularity of the prolapsed membrane became less, by contraction of the capillaries and surrounding tissues, and in ten or twelve days was entirely retracted within the external opening of the canal, and the urethra presented a normal appearance.

Since my first case was published, I have been informed by Dr. M. D. Mann, of Buffalo, N. Y., that quite an able and exhaustive paper, covering this entire subject, had been written by Dr. T. A. Emmett, and was published in the *Transactions of the American Gynecological Society*. I regret very much that I did not know of, and had not seen, Dr. Emmett's paper when I reported my case, as it would have given me great pleasure to speak of his observations and skill in treating this rare disease, and of acknowledging the information and benefit I must have derived from an acquaintance with his views and experience.

In reviewing the history and particular features of the two cases, which I have seen, I am convinced in my own mind that the right line of treatment in each case, though entirely different, was based upon correct theoretical principles, and in each was promptly successful.

It may be thought by some, that inasmuch as the local application of tannic acid and glycerine was so successful in the last case, it might have been so in the first, and, if so, have saved the patient the risks of chloroform, and the possible accidents of even a simple operation. I would answer, that the size of the tumor in the first case, its extreme irritability, and the great pain and frequent efforts of micturition, made it necessary to adopt immediate operative measures for her relief, and hence justified any risks that were necessary in the procedure; still, in any subsequent case of this disease falling under my care, in which I can believe it is safe for the patient to delay, I shall certainly give the tannic acid and glycerine another trial, in view of their favorable action in the last case.

MEDICAL PROGRESS.

Septic Pneumonia of Young Children.—At the close of an article on this subject Silbermann draws the following conclusions.

1. The septic pneumonia of infants and nursing children, and which begins as a tracheo-bronchitis, is a catarrhal, and very often a foreign-body pneumonia.

2. It begins by the aspiration of decomposing amniotic fluid and genital secretions, or by the inspiration of strongly infected air from some septic disease of the mother.

3. Septic pneumonia of infants frequently accompanies diseases of the pleura, but seldom of other organs.

4. The alveoli and bronchi of the lungs of children dead of septic pneumonia are filled with bacteria.

5. The blood shows an increased amount of white globules, and a broken-down condition of the red.

6. Icterus is not a constant accompaniment of the disease.

7. The time at which the disease occurs is from one to two days after birth, and death usually takes place in about two days.—*Deutsch. Archiv f. klin. Med.*, December, 1883.

Sulphate of Copper in Obstetrics.—At the meeting of the Académie de Médecine, on March 4, 1884, M. Charpentier stated that he had employed sulphate of copper in obstetrics for some time, and from the experiments made in September and October, 1883, he draws the following conclusions:

1. Sulphate of copper, in solution of 1 to 100, is a good antiseptic, and may be of great service in obstetrics.

2. It is inoffensive to the patient, very cheap, and easily handled; it may be used for intravaginal or intra-uterine injections.

3. Sulphate of copper is both astringent and styptic, and may be used as a hæmostatic in place of Monsel's solution.

4. The solution used should be 1 to 100, and heated to about 96° F. It may be used for eight or ten days after parturition, repeated several times during the first twenty-four hours, if necessary. It lowers the temperature, and diminishes the frequency of the pulse.—*Journ. de Méd. de Paris*, March 8, 1884.

The Anatomy of the Hymen.—Dr. S. Pozzi has recently made a double series of anatomical investigations on this subject. First, on the embryo, in order to determine by sections the independence of the formation of the hymen, and the terminal parts of the ducts of Müller; and, second, on infants and adults, in order to dissect the masculine band (*bride masculine*) of the vestibule, and show its relations to the hymen. The conclusions which he draws from these investigations are as follows:

1. The hymen is an appendage of the vulva and not of the vagina; it is formed at the expense of the urogenital sinus, which also forms a short vestibular canal, this last being the entrance to the vaginal canal.

2. The name *bulb of the vagina* has been unwisely given to the lower part of the vascular plexus, which occupies a prominent position in that canal. There is no ground for distinguishing a distinct organ here, and it should not be compared to the bulb of the urethra in man. It may as well be said that the corpora spongiosa are the analogues of the labia minora.

3. An attentive examination of the vestibular region in woman will show a small band or frænum (*bride*) between the clitoris and the meatus, about two-tenths of an inch long in the adult, easily recognized by the rectilinear outline of its borders, marked by a median furrow, and divided inferiorly so as to encircle the meatus. When the hymen exists, it appears to be continuous with this frænum. Pozzi proposes to call this small band, now described for the first time, the male frænum of the vestibule (*bride masculine du vestibule*).

4. The study of the balano-urethral frænum—so noticeable in cases of hypospadias—shows the identical connections between that large band and the atrophied frænum (*bride*) of the female vestibule.

The bifid condition at the meatus and its continuity with the hymen are easily shown. But in hypospadias it

is clear that the frænum is a vestige of the corpus spongiosum arrested in the embryonic stage. The hymen of the hypospadias then, proceeding from the frænum, s an appendage of the corpus spongiosum, and is the terminal part or bulb. This conclusion may be applied to the female organ, and it may be said that *the hymen in the female is the analogue of the bulb of the urethra in man; it is the bulb arrested in the fœtal state, non-erectile, and membraniform.* [Henle has noted the frequent presence of cavernous or erectile tissue in the hymen.]

5. The connections of the gland of Bartholin to those of Cowper may be also easily made out. The considerable length of the excretory canal for the male glands, compared with their shortness in the female, should be especially considered. This admits of the opening of the canal considerably in front of the membranous region, at a certain distance in front of the posterior part of the bulb; that is to say, at a point exactly corresponding to the opening of the duct of Bartholin, in front of the hymen, at a certain distance from the fourchette. The opening of Bartholin's gland in the prehymeneal portion of the vulva is the origin of that singular lengthening of Cowper's duct.

6. The male frænum of the vestibule in woman is the vestige of the anterior or cylindroid portion of the corpora spongiosa, just as the hymen is the vestige of their posterior or ovoid portion.—*Gazette Méd. de Paris*, February 23, 1884.

PORRO OPERATION ON ACCOUNT OF TUMOR OF THE CERVIX.—DR. DENARÉ reports (*Lyon Méd.*, 1883, No. 20) the case of a woman, æt. forty-two years, who had had thirteen children and two miscarriages. She was now in labor for the sixteenth time. On examination a hard tumor was found in left iliac fossa; it was large, sprang from the posterior lip of the cervix, and between it and the anterior pelvic wall there was scarcely room to admit a finger. On November 23, 1882, three days after the first pains, the Porro operation was performed. The fœtus was found to be macerated. The woman recovered.—*Centralb. f. Gynäk.*, February 23, 1884.

THE RADICAL CURE OF INGUINAL HERNIA.—MR. J. K. BARTON, in a paper on this subject, refers to the *direct method* as described by Prof. S. D. Gross, and reports three cases. The first was that of a boy, about three years old, who had an enormous ingüinal hernia, which could not be kept in place.

An incision, two inches in length, was made obliquely from above downwards and inwards, its upper extremity corresponding to the internal ring; the fascia was carefully divided upon a director, and when the internal ring was reached the index finger of the left hand was introduced into it, so as completely to prevent the descent of the hernia, and, at the same time, to regulate the next step, which was the introduction of the wire suture; and for the remainder of the operation the finger maintained this position. A curved needle, with the eye close to the point, was then passed through the inner pillar of the ring (care being taken not to introduce it too near its free edge), and, guided by the left forefinger, was safely carried across the ring and through the outer pillar from behind forwards; a strong silver wire was then passed through the eye, and the needle was withdrawn; thus the first wire stitch was introduced and similarly a second—only two were placed in this case—the finger was then withdrawn, and the wire was tightened, drawing the sides of the ring into close contact. When firmly secured by twisting, the cut ends were carefully bent down so as to lie in the axis of the wound, and not project either forwards or backwards. Drainage was provided for by a few catgut threads, the wound was then closed, and dressed with protective and gauze. This case subsequently ruptured again, but the other two, upon which the same operation was performed, were complete successes.—*Dublin Journ. of Med. Sci.*, February, 1884.

THE CAUSE OF ABORTION OR PREMATURE LABOR.—In an interesting discussion on the reciprocal influence of traumatism and pregnancy, before the Société de Chirurgie, in 1876, it was conceded that: 1. The true predisposing cause of abortion is irritability of the uterus, that is to say, the property possessed by the tissue of that organ of responding, by virtue of contractility, to external or internal stimuli, whether direct or indirect. 2. When the woman, the uterus, and the ovum are sound, this property is but slightly developed, and traumatism has but little influence in causing abortion or premature labor. In these favorable conditions, experience has shown that injuries, falls, blows, and severe surgical operations are not likely to cause these accidents, unless the genital apparatus itself is involved. 3. The causes producing inability of the uterus, and, consequently, which cause that organ to contract and expel its contents, are: *a*, Diseases or lesions of every nature which affect the uterus; *b*, diseases of the ovum, affecting the placenta, the cord, or the fœtus, death of the fœtus, and hydrops amnii; *c*, certain general morbid states affecting the mother, comprising acute diseases, as typhoid fever, the eruptive fevers, cholera, and various epidemic influences; and chronic diseases, of which the principal are albuminuria, constitutional syphilis, the various cachexiæ, constitutional or acquired feebleness, saturnine or paludal poisoning, chloro-anæmia, etc. According to Guéniot, these general causes may act in two ways—either directly, by causing uterine irritation, on account of the local state of the organs, or, indirectly, by altering the ovum.

Among the chronic diseases causing abortion, says DR. F. VINCENT, chloro-anæmia merits special attention, as it exerts a marked influence on the whole system. Of the functional troubles, those of the nervous system play the most important part. In certain cases the nervous symptoms assume a very grave character, and the malady is complicated by spasms, such as chorea, epilepsy, paralysis agitans, and even by mental alienation. Furthermore, chloro-anæmia is remarkable in that it complicates most of the chronic diseases mentioned above, notably those affecting the nervous system, as: 1. Albuminuria (so frequently a cause of eclampsia during pregnancy or labor). 2. Saturnine intoxication. 3. Mercurial cachexia. 4. Constitutional syphilis. 5. Paludal intoxication. 6. Hysteria in all its forms. It may be considered as an established fact that chloro-anæmia renders the nervous system very impressionable to outside influences, and it would seem that an essential neurosis may exert the same effect in causing abortion as an acquired neurosis.—*Journal de Méd. de Paris*, February 16, 1884.

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EMMET'S OPERATION FOR LACERATION OF THE CERVIX.

IT has been said that a new operation usually passes through three periods in regard to professional favor. In the first it is decried; in the second it is unduly commended; while in the third it is given its just appreciation. Dr. Emmet's operation for laceration of the cervix—an operation now hardly fifteen years old, has probably not completed the second period mentioned, at least so far as this country is concerned; it still occupies a higher position, we believe, than that which will be ultimately assigned it.

Yet we do not for a moment suppose that Dr. Emmet would now say, as he did in the last edition of his *Gynecology*, that the operation should be done in every case in which the laceration, though healed, is evident, and in which the womb is enlarged, or in which the patient has neuralgia—a liberty of operating that in some hands may have become a gross and mischievous license. This doubt is a conviction when we read the following statement from Meyer Leopold—*Revue des Maladies des Femmes*—who recently visited this country: "Dr. Emmet has greatly modified his view of the utility of the operation, now limiting it to those cases in which the rent extends to the cellular tissue lining the vaginal cul-de-sacs, causing a peri-cervical inflammation, and hence this parametritis is regarded as the essential point of all the evil." This inflammation causes the eversion, and that eversion demands the operation. Leopold goes on to say that a laceration not involving the cellular tissue lining the vaginal cul-de-sacs does not merit the attention of the surgeon; and still further, that eversion of the lips of the womb and exposure of the cervical mucous membrane are phenomena observed independent of all tearing of the cervix—it is the pathogenetic process of change of the mucous membrane, and of the ulceration of the cervix which is its consequence; a morbid state which can be remedied much more usefully, and, especially, much more permanently, by excision of the mucous membrane and deep ignipuncture. Even in cases in which there is cicatricial ectropion, Leopold holds that other means are better than tracheloplasty.

Without endorsing in full Leopold's views, it is very evident that our distinguished countryman, Dr. Emmet, does not attach such importance to his operation as he once did, and very much less than some who supposed themselves his faithful followers. We look now for that reaction which will assign the proper place to the operation, for some have made lacerations of the cervix almost the alpha and the omega of their uterine pathology, and plastic operations for the remedying of these tears almost the alpha and omega of their uterine therapeutics. Women have been made unhappy by being told that they were so badly injured in their labor that they could never be well until the torn womb was sewed, and sometimes, possibly, unjust reproach cast upon a competent and careful obstetrician who had attended them in labor.

Hardly one woman in five hundred gives birth without some tearing of the cervix; the virgin os, the nulliparous os is lost in labor, and is never restored; in fact, the distinction between anterior and posterior lip of the the womb is without existence prior to childbirth, while it is normal afterward, and therefore in almost every woman who has borne a child one or more tears, healed or unhealed, can be discovered by expert finger and eye. The traumatism in this, as in so many of the sex-functions of woman, is physiological. Her first sexual intercourse is often attended with traumatism; traumatism marks every monthly period, the uterus, and one or the other ovaries is then wounded, and these latter organs carry until the body moulders in dust the scars of traumatisms, to which they have been periodically subjected for thirty years; it would be as needless to endeavor to restore these scarred and seamed ovaries to the condition in which they were before menstruation, or to devise a hymenoplastic—of course, gyneocologists will be grateful for a new Greek compound, their science is so poor in such treasures—operation, as to restore the parous to the virgin cervix. We have never believed that woman's uterus was so imperfectly formed, or that obstetricians were so ignorant, so meddlesome, or so mischievous in their practice, that a large percentage of women in the martyrdom of maternity

had the cervix so seriously torn that a surgical operation was necessary to repair the injury.

We are aware that the operation pompously decorated as hystero-trachelorrhaphy—it ought to be tracheloplasty, rather than trachelorrhaphy, as it is more than the simple introduction of stitches—is usually neither difficult nor long. But we further know that the immediate consequences are not always so simple and safe as most writers upon the subject have generally found them, for without seeking to learn untoward results, we know of two cases in which dangerous secondary hemorrhage occurred, others in which the operation was followed by serious pelvic inflammation, and four unpublished cases in which the patients were dead within a week.

But we are told of remarkable cures. Certainly in those cases in which the operation was plainly indicated—and we are not sure these constitute a majority of all that have been operated upon—the results have been most satisfactory. Then as to others, in which various neurotic disturbances have been relieved or cured by tracheloplasty, the thoughtful gynecologist may see only the result of a profound mental impression. Other patients are cured by the operation simply because the removal of even a small portion of hypertrophied cervix hastens absorption, and thus lessens the size of the part. Still others are, at least for the time, relieved simply by the local depletion attendant upon the operation and the prolonged rest which follows it. There remain some cases in which neither the patient nor the physician will discover any permanent good from the operation—both are disappointed. This fact we state from our own experience, from the observation of cases operated upon by others, and from the testimony of some operators themselves.

Just now the profession, in this country at least, does not so much stand in need of the voices of the enthusiastic advocates of Emmet's operation—some of whom are doing it in cases in which he he would not—as the calm conclusion of the saving remnant who seek to render exact justice to every advance in medical and surgical therapeutics.

INTERNATIONAL COPYRIGHT.

EVERY few years the question of granting American copyright to foreign authors comes to the surface and agitates the literary and publishing world. It is the natural and inevitable effort to redress a wrong of which the nation is guilty, and its recurrence at frequent intervals is to be expected until that wrong is removed. We are now in the midst of one of these periodical movements, and as the medical profession is largely composed of thoughtful reading men, to whom books are a necessity, a few words on the subject may not be amiss.

It is now three years since the last attempt was made to obtain international copyright, by what was known as the "Harper Treaty." That attempt was abandoned for reasons that were never publicly known, but its failure was attributed, apparently with reason, to the hostility of the English publishing interests to the clause requiring all books copyrighted in this country to be manufactured in this country—a provision which would seem reasonable alike for the interests of many thousands of operatives dependent upon the book-manufacture and of millions of readers who would be unable to purchase books in the costly style in which they are habitually produced in England. Early in the present session the Hon. Mr. Dorsheimer, of New York, introduced in the House of Representatives a bill granting American copyright to the authors of all countries which should grant equal and similar privileges to American authors. This bill is understood to have been drawn up by the "American Copyright League," a body formed for the purpose of securing legislation on the subject, and claiming a membership of about six hundred gentlemen, comprising nearly all the professional authors and leading journalists of the country. So large a body, thus composed, must necessarily exert no little influence, not only on account of the character of its members, but also from the fact that it controls in large part the organs of public opinion, the means of reaching the public, and the channels by which the public can make itself heard. The bill thus fathered was somewhat ostentatiously proclaimed to be purely an author's bill—a bill designed to secure the rights of authors in their literary property at home and abroad, regardless of the effects which the proposed legislation might have upon the interests of the public at large.

Copyright, like patent-right, is so purely artificial a creation, springing from modern inventions, which render the indefinite multiplication of books a possibility, and from the modern spread of education, which renders the multiplication of books a source of profit, that it has not yet reached the stage of legal recognition as an indefeasible right inherent in authorship. It is thus far the creation of statutes which professedly bestow it on the author, not for his own benefit, but for that of the public. This is expressly stated in the article of the Constitution of the United States which confers upon Congress the power to grant copyright, and thus is the only source through which copyright can be enjoyed in this country. Whatever may be the case in the future, the public is thus not yet prepared to grant additional and far-reaching rights to authorship without inquiring as to the effect which those

rights would have upon the interests of society in general. It was seen that the result of Mr. Dorsheimer's bill would be to make the United States virtually dependent upon England for its supply of future English literature, and it was felt that when English publishers should hold the monopoly of the American market, they would not be likely to adapt their forms of publication to the tastes of American readers nor to limit their profits by the requirements of the masses in this country, who want good literature, but who have been accustomed to procure it at prices almost nominal, as the result of unlimited competition. The trades interested in book-manufacture—the printers, paper makers, and others—moreover, took the alarm, and urgently protested against a measure which would so seriously cripple them.

Various amendments have been proposed to Mr. Dorsheimer's bill, with a view to reconcile as far as possible all conflicting interests—to secure substantial justice to authors without bearing too hardly upon readers and producers. These amendments are designed, in one way or another, to secure the manufacture of copyrighted books in this country, and thus to have them issued in forms and at prices suited to the necessities of American readers. Unfortunately, thus far Mr. Dorsheimer and his friends have refused to accept any such modifications of the measure, although they have not been able to show that the proposed changes would in any way prove injurious to authors, either at home or abroad.

The fact is that the American author is already well secured as to his foreign rights. By the liberal construction of the English law he can obtain a copyright in Great Britain on the simple condition of first publication there; and through his English copyright he has copyright in all countries with which Great Britain has copyright treaties. At home, however, he is subjected to the destructive competition with English literature, which can be had gratuitously, and is reproduced at the lowest practicable rates. From this competition he has a right to ask for relief, and that his natural market shall not be forestalled by supplies thus unrighteously cheapened. The English author, too, has ample ground for complaint in seeing his productions seized without leave and indefinitely reproduced without, in many cases, yielding him benefit. In fact, the only advantage he reaps from the greatest market of the English-speaking race is derived from the honorable feeling of those publishing houses who are wont to recognize an obligation that is not enforced by legal sanction, and this is a position from which he, too, has a right to ask for relief. Both of these crying wrongs would be removed by any form of international copyright, whether it requires home manufacture or not, and it is not easy to understand the persistence with which Mr. Dorsheimer and his friends refuse to permit any modification of their measure.

At this present writing the probabilities would seem adverse to the passage of any copyright measure at the present session. Should this prove to be the case, the responsibility will rest upon those who decline to recognize that the public has any claim to be heard, or that its interests are in any way to be taken into account. Yet the movement, even in such case, cannot be regarded as a failure. It is not likely that the American Copyright League will disband or be disheartened by a temporary want of success. It will doubtless continue in existence, and perhaps before next session it may learn to look at the matter in a broader light, and frame a measure which shall command such general support that the reproach of disregarding authors' rights will be removed from our statute-book with scarcely a dissenting voice.

LIGATION OF THE COMMON ILIAC ARTERY.

In the *Centralblatt für Chirurgie*, No. 10, 1884, may be found the report of a successful ligation of the primitive iliac artery for aneurism of the internal iliac, by Professor Schoenborn, in which the catgut ligature and antiseptic precautions were employed. In 1883, Dr. Packard recorded a fatal instance, with a statistical table of sixty-seven cases, in the first volume of the *Transactions of the American Surgical Association*, and Dr. Kümmell reported to the twelfth *Congress der deutschen Gesellschaft für Chirurgie* one recovery and one death from his own practice, along with an analysis of sixty-two cases. Having made a careful examination of these papers, and added other examples which have escaped the notice of these surgeons, we are enabled to lay before our readers the results of 79 cases, which do not, however, include those of Beugnot, Dumreicher, Lemprière, and Medoro, the original references to which are inaccessible.

Grouping the cases into four classes, we find that the vessel has been tied for the following conditions: First, for hemorrhage, whether primary or consecutive to the ligation of other trunks, or during the performance of other operations 28 times, of which 4 recovered, and 24, or 85.71 per cent., died. The operators were Baudelocque, Blandin, Brainard, Buck, Busch, Carr, Czerny, De Lisle, Edwards, Gibson, Gilpin, Garviso, Hamilton, Holt, Ingram, Kümmell, Kümmell, Liston, McKee, McKinley, A. B. Mott, Mowret, Packard, Parker, Pirogoff, Post, Uhde, and Von Langenbeck.

Secondly, for the cure of aneurism 43 times, with 15 recoveries and 28 deaths, or a mortality of 65.11 per cent. The operators were Barbosa, Barral, Baxter, Bickersteth, Briarly and Hammond, Caldas,

Cock, Crampton, Cutter, D'Almeida, Garviso, Goldsmith, Gouley, Hargrave, Hey, Hunter, Isham, Jones, Knorre, Ladureau, Lange, Luzenberg, Lyon, Maunder, Mayo, A. B. Mott, V. Mott, Nicoladoni, Peace, Pitta, Richter, Salomon, Sands, Schoenborn, H. Smith, Stephen Smith, Stevens, Stone, Sulzenbacher, Syme, Syme, Van Buren, and Widderburn.

Thirdly, for pulsating tumors simulating aneurism 5 times, of which 1 recovered, and 4, or 80 per cent., died. The operators were Baker, Guthrie, Meier, Moore, and Stanley.

Fourthly, as a preliminary step to prevent hemorrhage during the removal of a tumor or amputation at the hip-joint 3 times, of which all were fatal. The operators were Bünger, Bushe, and Chassaignac.

With such a gloomy record before us, namely, a mortality of 74.68 per cent., we cannot endorse the view of Packard that it would probably be sound surgery to resort to preliminary ligation of the common iliac artery to prevent hemorrhage in amputation at the hip; nor can we agree with Kümmell, who holds that the procedure is preferable to ligation of the external iliac, for aneurism of that vessel seated high up, and of the femoral artery, because it is far less liable to be followed by gangrene of the lower limb than the latter operation.

THE PATHOGENESIS OF IDIOPATHIC ULCERS OF THE LEG.

IN a recent brochure, M. SCHREIDER attributes the occurrence of spontaneous ulcers of the leg to nutritive disturbances brought about by certain primary degenerative changes in the vascular system, and secondary alterations in the nerves of the part. In all of the cases examined he found, in the order of their appearance and succession, first, phlebectasis of the superficial and deep veins, which becomes apparent between the ages of twenty and thirty; second, atheromatous degeneration of the arteries, which manifests itself, as a rule, between the fortieth and fiftieth years; and, third, alterations in the local nerves, provoked by sclerosis of the tissues, which sclerosis is the natural result of the vascular disturbances. The part played by the nerves in the etiology of the affection is demonstrated by the general, tactile and thermal sensibility; and the disorders which the nerve lesion evokes are analogous to the purely trophic disturbances met with in diseases of the central nervous system and ascending neuritis..

MICROCOCCI OF PNEUMONIA IN SPUTUM.

As far back as June, 1883, DR. FRANZ ZIEHL (*Centralbl. für die med. Wissensch.*, No. 25) called attention to the fact that the micrococcus of pneumonia could be recognized with comparative ease in the sputum of that disease. Still more recently (*Ibid.*, February 7, 1884) he reiterates this statement. The distinctive feature of this micrococcus is the hull or capsule of mucous or gelatinous substance which Günther was the first to discover, and which Friedländer also describes as being very characteristic. It is extremely rare upon other micrococci; in fact, as good as absent in all other micro-organisms found in the human body, except the lepra bacilli, from which its shape easily distinguishes it. This capsule may surround a single coccus, or it may contain again two, three, four, or even more. It is not, however, invariably demonstrable, because from some cocci it is absent, and in certain others it is not easily discerned, while sometimes empty capsules are found. Specimens are best prepared by treating the dried sputum with a watery solution of gentian violet, and examining the colored preparation in a drop of water.

The demonstration of these micrococci in sputum, says Ziehl, has not merely an etiological, but also a diagnostic value, as they are found even before the physical signs are distinctive, or the rust-colored sputum has made its appearance; and when it is remembered how often these symptoms are wanting when the physician is first called, we may have in the finding of the organism in the sputum of pneumonia an assistance to diagnosis just as valuable as the bacillus of tuberculosis.

SYPHILITIC REINFECTION.

IN a series of contributions to the *Wiener medizinische Presse*, Nos. 1, 2, 4, and 5, 1884, PROFESSOR NEUMANN discusses the highly important question as to whether syphilis can be acquired more than once, an occurrence which has not been witnessed by Bärensprung, Sigmund, and Fournier, but has been met with by Diday, Zeissl, Bumstead, Hutchinson, Lee, and other equally careful and experienced syphilographers.

From a critical examination of the recorded examples of reinfection, Neumann reaches the conclusion that, although syphilis usually occurs but once in the same subject, cases of undoubted reinfection have been observed, but that they constitute only about one-half of the recorded instances of a second outbreak. The criteria of reinfection are a clear history of the first infection, an initial lesion, enlargement of the inguinal glands, and subsequent secondary manifestations. A sore following coitus may be a relapsing induration, a gumma, or a chancroid, the last of which lesions exhibits a marked tendency to an indurated base in syphilitic patients, so that a hard lesion seated on the genitals, without concomitant adenopathy and consecutive constitutional symptoms, is not an indication of a second attack.

REVIEWS.

What to do First in Accidents and Emergencies; a Manual Explaining the Treatment of Surgical and other Injuries in the Absence of the Physician. By Charles W. Dulles, M.D., Fellow of the College of Physicians of Philadelphia, etc. Second edition, revised and enlarged, with new illustrations. 12mo. pp. 119. Philadelphia: P. Blakiston, Son & Co., 1883.

This handy little volume makes its appearance in a second edition, which has been revised and enlarged and freshly illustrated, so that, in its present form, it is practically a new book.

It is written for the public, and the suggestions it contains are simple and practicable, so as to be easily comprehended, and readily acted upon whenever an emergency may arise. A very complete index has been provided, and, as a further aid to prompt reference, the topography has been so arranged that leading words may catch the eye on every page.

The preparation of such a book is not an easy task. It requires familiarity with every possible contingency, and the exercise of good judgment, wise discrimination, and the faculty of suggesting and adapting the simplest means to the end in view. The object of the book, to supply such information as may be of service during the interval between the occurrence of an accident and the arrival of one professionally qualified to take charge of the case, must be kept steadily in mind, so as to introduce nothing which will have a tendency to impart to the inoffensive bystander the power of officious and hurtful meddlesomeness.

Dr. Dulles has brought to the performance of his task a felicitous combination of the needed qualifications, and his little book can be safely recommended as one of the best of the kind to be placed in the hands of the public.

SOCIETY PROCEEDINGS.

RHODE ISLAND MEDICAL SOCIETY.

Quarterly Meeting, held in Providence, March 20, 1884.

(Specially reported for The Medical News.)

The Society met in Lyceum Hall, Providence, March 20th. The President, Dr. Job Kenyon, in the Chair.

The Secretary, Dr. Geo. D. Hersey, read the record of the December meeting, which was approved.

Dr. Neil O'Donnell Parks read a paper upon

topical cardiac blistering in the treatment of acute rheumatism.

He had employed this mode of treatment in seven cases, and in one of them no other measures whatever were used; the result being in this, as in the other cases, a prompt and complete cure. In the remaining cases, salicyn, or one of its allied compounds, and ammonium carbonate were given internally. Oleum gaultheriæ was used in some instances—internally in doses of fifteen drops once in two hours, and applied locally to the inflamed joints, combined with an equal amount of lin. camphoræ comp. The series described included cases of acute articular rheumatism, and rheumatic gout, so called. In some of the cases an endocardial murmur was present. Usually, one blistering sufficed, but in case of relapse it was repeated. The writer expressed his belief that we have, in the method under consideration, a most valuable adjunct to our means of successfully treating rheumatism.

Dr. H. Terry read a paper upon the

prevention and treatment of puerperal fever.

A most important preventive measure is to secure the prompt and firm contraction of the uterus immediately after delivery, and the attendant should guard against temporary relaxation and partial dilatation for at least half an hour, or until the condition of firm contraction becomes established. The application of cold to the abdomen, pressure, friction, ergot in small doses, and a carefully applied binder, were named as means to be employed. The writer objected to the repeated use of an antiseptic vaginal douche before delivery, as it must necessarily wash away the mucous secretion and keep the vagina so *dry* as to retard labor, and increase the danger of rupture of the soft parts. Belief was expressed in the *septic* origin of puerperal fever, and that *milk* fever is also a mild type of septic fever. He had used as injections only solutions of permanganate of potash and carbolic acid, and of the two he preferred the former. In one case cited, the douche was continued for ten days, and brandy, ʒij–v, was given hourly with quinine, anodynes, and tonics, as indicated. If the first intra-uterine injection does not prove beneficial, it should not be repeated.

Dr. Lloyd Morton, of Pawtucket, exhibited a specimen of

impacted intracapsular fracture of the neck of the femur.

The patient was a woman, seventy years old, and the injury resulted from muscular strain, and not from direct violence. At the time of injury, there was no shortening, no crepitus, no preternatural mobility, and the patient could even rotate the thigh. A correct diagnosis was made, however, by exclusion, as was shown, post-mortem, four weeks later, death resulting from causes independent of the injury.

Dr. H. G. Miller, of Providence, read a paper on

blepharospasm.

He made four forms in his classification, according to the degree and severity of the case.

1. A simple spasmodic contraction (clonic) of the upper or lower portion of the orbicularis muscle—oftener of the lower portion. This condition is regarded as occurring more frequently in hypermetropia than in myopia; but, in the writer's experience, myopic persons are more prone to complain of it. The cause of the symptom, however, is not always to be found in some refractive error, but may be fatigue of the eye or of some portion of the nervous organism, or the excessive use of tea or coffee, etc. The lids of one or both eyes may be involved in this type of the disease.

2. Nictitation, which involves the muscles of both sides, causing violent and too frequent winking. It is liable to occur in children, and hyperæmia of the lids and conjunctivæ may be the cause of it.

3. An exaggeration of the natural effort of the lids to cover and protect the eyes, due most frequently to photophobia, and rendering the palpebral opening smaller than normal.

4. Spasm of the orbicularis of one side, and likewise of all the muscles supplied by the facialis nerve. Usually some twig or branch of the trigeminus is the primary seat of the trouble—in the teeth, jaws, or even the external auditory meatus. Again, it may be due to epilepsy, chorea, or traumatism. It may be of centric origin. It may be congenital, and accompanied by nystagmus. In children, intestinal worms, both lumbrici and ascarides, may be the cause. The result of this one-sided spasm is often to give the patient an appearance of adding a mysterious significance to his conversation, or, what is more serious than such disfigurement, amblyopia may be caused by it. He had observed in one case a row of abrasions of the cornea corresponding to the line of pressure of the lid.

In both the upper and lower lids are certain smooth muscles, spasmodic action of which tends to increase the palpebral opening, and expose the sclerotic beyond the conjunctival margin, and giving the peculiar staring expression sometimes seen, especially among some classes of insane patients.

Three cases were then mentioned:

Case I.—A man, thirty years old, seven months ago began to suffer from contraction of the right eyelids. The trouble soon extended to the left eye. Apparently, his general health was perfect. The spasmodic contraction in this case was so severe as to cause the corneal abrasions already referred to. He had found that any unusual excitement or diversion of his mind, such as playing on his violin, riding in the street-cars, etc., would enable him temporarily to relax the eyelids, when the eyes would resume their natural appearance.

None of the remedies as yet tried had effected permanent relief in this case. The ext. c)nii fl. (Tilden's) was given in doses increasing from gtt. v to gtt. xxx or xl; and subsequently Squibb's preparation, in doses going as high as gtt. lxx—all with no benefit. It yet remains to employ the method of Dr. Wordsworth, of dividing or stretching the lids outwards.

Case II.—A sempstress, aged twenty-one years, and hypermetropic in a high degree. Her eyes became useless from spasm of the lids. By correcting the refractive error with glasses, and the administration of bromide of potassium very nearly a complete cure had been accomplished.

Case III.—Man, forty years old, and myopic. Suffered severely from contractions of the eyelids and twitching of the face. Careful examination revealed myopic astigmatism of one eye, with myopia of the other. Correction of both by glasses led to a complete and permanent cure.

A case was also cited which was reported to have occurred in Belgium. Here the upper lid was so firmly contracted over the eye as mechanically to obstruct vision. The treatment was to make a permanent elliptical opening through the lid, opposite the pupil, through which the patient was again able to see.

DR. O'LEARY asked if injury to the facial nerve ever destroyed the sight, and spoke of an army officer whose face was grazed by a Minie-ball, causing a slight abrasion of the skin at the eyebrow, but very little pain. The sight of that eye, however, was immediately and permanently lost.

DR. MILLER said that, in such a case, he should regard the loss of vision as probably due to concussion of the retina; but that, indirectly, injury to the facial nerve may destroy the sight.

DR. BURGE read a report of a case of

DISEASE OF THE BLADDER, PROBABLY MALIGNANT,

The man was about sixty years of age, who attended to business until a few days before his death—nearly all the symptoms of stone had existed for some time. No urine was voided for five days before he died. The autopsy revealed a dense, whitish growth inside the bladder, occupying a surface as large as a half dollar, and so involving both ureters as wholly to occlude them.

DR. CASWELL said that he was associated with Dr. Burge in the case just reported. The bloody urine, containing crystals of oxalate of lime, frequent micturition, and pain in the end of the penis, had led him strongly to suspect the presence of stone, but a careful examination with a Thompson's searcher discovered none—a roughened surface could be felt, however. Not long after the examination the patient said he voided a small stone, which was lost. Dr. Caswell remarked, at this point, that, owing to congenital phimosis, he had been able to use no larger instrument than the one named above, in his examination for stone, and had decided to operate for the cure of the phimosis, but the patient grew worse and died in a few days. He thought it much better, when the presence of a *small* stone is suspected, to introduce, if possible, one of the tubes of the Bigelow evacuating apparatus, and wash out the bladder, as it is probable the stone would be brought out or at least engaged in the eye of the tube and removed in that way. He had made a careful microscopic examination of the growth found in the bladder in this case, and thought it to be a fibro-sarcoma, and that death resulted from the mechanical obstruction it caused rather than from its constitutional effects. The specimen was shown.

Dr. Caswell also spoke of a case which he had recently operated on at the Rhode Island Hospital. The man, twenty-seven years old, had had abscesses and fistulous openings in the perineum for two years. No stricture existed, a sound (No. 24, French) passing naturally into the bladder. He decided to operate for the cure of the three perineal fistulæ. On opening up one of them, seven small calculi were found which seemed to be fastened to the roof of the fistulous tract, where they had probably formed. These were about the size of small peas, round, rough, and of a whitish color. He was not certain whether they were oxalate or urate of lime.

DR. MORTON said, relative to the proposed

LAW FOR MEDICAL EXAMINERS,

that the bill was now before the Legislature, and would probably be enacted this session, but that the form approved and submitted by the Medical Society had been subsequently so far modified as to continue the office of coroner, and provide for medical examiners also. This was due, he said, to the great fondness that seems to prevail among the people and the legislators for the time-honored name and function of the coroner.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, March 17, 1884.

THE PRESIDENT, WILLIAM DETMOLD, M.D., IN THE CHAIR.

DR. GEORGE L. PEABODY read a paper on the

TREATMENT OF TYPHOID FEVER.

(See THE MEDICAL NEWS, March 29th, page 355, and April 5th, page 383.)

DR. AUSTIN FLINT, JR., in opening the discussion, said that the subject of animal heat was one not only of great physiological, but also of great pathological interest; and that any measures intended to counteract a body-heat transcending the limits of normal temperature should be based on a knowledge of the physiological production of heat. There is no physiologist at the present day who does not believe that heat-production is one of the results of a class of phenomena occurring in the tissues themselves, and that heat is not supplied to the tissues by the blood. Formerly, however, it had been the accepted opinion that certain changes took place in the blood which elevated the temperature of that fluid. The lungs were supposed to be a kind of furnace in which the heat was manufactured, and the arteries, a set of flues to convey it to all parts of the body. But this was disproved by experiments; for it had been shown that the blood coming from the lungs was not hotter than that which was going to these organs. The seat of the heat-producing process, therefore, has been transferred to the tissues themselves, although it is still regarded as involving oxidation. As to the extraordinary production of heat met with in typhoid and other essential fevers, this was no doubt due to some change in the normal process which was not as yet understood. In modern physiology, the tendency is to reduce everything to mathematical exactness; and as regards the transformation of one force into another in accordance with the theory of correlation of forces, nothing is lost and nothing created. The result of the consumption of a certain amount of oxygen in the body is the formation of a certain amount of carbonic acid gas and the discharge of a certain amount of excrementitious material.

The heat-value of various elements of food has been determined by burning them in oxygen, the heat-unit being taken as the quantity of heat required to raise the temperature of one pound of water one degree Fah. The quantity of heat produced in the body has also been determined by the careful experiments of Senator and Prof. John C. Draper. The latter has ascertained that four heat-units are produced per pound weight of the body per hour. The law of the correlation of forces admits of the expenditure in the body of a certain amount of force as work; but there exist serious errors in connection with these calculations. Thus, in the transmutation of heat into force, one heat-unit is said to be equal to 772 foot-pounds; but the fallacy in the application of the law of correlation of forces has been in always considering the physiological processes from the point of view of the conversion of heat into force, while the formula that one heat-unit equals 772 foot-pounds was deduced by experiments converting force into heat and never heat into force. Some years ago, he had had the opportunity of making a series of observations upon a pedestrian while engaged in walking 317½ miles in five consecutive days. The food and drink which the subject of these observations took (every article of which was carefully weighed), with the loss of body-weight, represented 33,000 heat-units, while the heat actually produced equalled 55,000, so that there was a deficit of 22,500, or 40 per cent. In the year 1878, he himself had fasted for 33 hours, and during the last 24 hours of this period made careful observations, the first 9 hours being left for the disposal by digestion of the food already in the system. During this time 18,000 heat-units were produced, while the heat-value of the nitrogen of the urine and the carbon given off by the lungs was only 12,500 heat-units. There was thus a deficit of 5500. Afterward, he made a similar series of observations on himself for 24 hours, while taking food as usual, when he found that the difference between the heat evolved (18,000 heat-units) and the heat-value of the food taken (15,000 heat-units) was 3000 heat-units (no allowance being made for the work of the heart and of the respiratory muscles). Such facts seemed to render some modification of the theory of the production of heat necessary; and it became pertinent to ask whether water was not produced in the body by the union of oxygen and hydrogen. This was a question which was not incapable of solution by experiment, at least approximatively. It was, therefore, a point of great importance to show, if possible, that more water was discharged from the body than had been taken into it. In the case of the pedestrian before alluded to, while the body-weight at the beginning, with the ingesta, amounted to 2750 ounces, the body-weight at the end of the observations, with the urine, feces, and carbon discharged by the lungs, amounted to only 2100 ounces. The difference, 650 ounces, therefore, equalled the loss of water by the skin and lungs. In the five days, the total amount of water given off was 850 ounces; while the water in the drink and the solid food which he took amounted to 788 ounces; so that there was an excess of 62 ounces of water given off. Similar observations upon himself showed a like result. The production of anything, either heat or force, involved the consumption of material; and he had become convinced that this formation of water in the body by the union of oxygen and hydrogen was a most important factor in the production of animal heat.

In fevers there was an exaggeration of the normal heat-producing process. The fever fed upon the tissues of the body; and it necessarily followed that it must produce disastrous destruction of these tissues, unless there was something else for it to feed upon. The question, therefore, arose, how can such other material be supplied? The answer was, that it must be by means of food. Fuel for the flames raging in the system had to be furnished, and it had occurred to him that this might be best accomplished by the administration of fatty substances (such as cream and cod-liver oil, perhaps), farinaceous substances, saccharine matters, particularly glucose, and alcohol. Experience had already shown conclusively that alcohol, although a heat-producer, did not increase the temperature in fevers, but, on the contrary, diminished it. Theoretically, one ounce of French brandy was equivalent to three hundred and ninety-eight heat-units; and thirty-four ounces in the twenty-four hours would supply all the heat required in the body

of a man weighing one hundred and forty pounds. In looking at this matter from a physiological point of view, he had become so much impressed with its importance, that he was desirous to test it by treating a number of typhoid fever patients in the manner indicated. Cold baths, he thought, were useful; but if for the weeks that the fever lasted a sufficient amount of the material mentioned could be introduced into the system, he was convinced that, at the end of the attack, the tissues would be in a condition more nearly normal than if the case had been treated without the adoption of such measures.

THE PRESIDENT remarked that in advocating the administration of the hydrocarbons (and particularly the fixed hydrocarbons) from a physiological point of view, Dr. Flint seemed to forget that introducing these substances into the intestinal canal did not necessarily introduce them into the tissues. The trouble would be, that the fuel would lie inert in the intestinal canal and be discharged inert from it. He had presupposed normal digestion; while the fact was that, in typhoid fever digestion, assimilation and nutrition were very seriously impaired, and hence this fuel would not be acted on at all. He believed, therefore, that it would not be possible to carry out practically the theoretical ideas which Dr. Flint had advanced on this subject.

DR. E. G. JANEWAY said that he was afraid that an erroneous impression might be received from some of the statistics which Dr. Peabody had given in support of the treatment by refrigeration. In all such statistics the circumstances under which patients were admitted to the hospitals ought to be understood. Thus, during the late war many patients were carried for a long distance at a critical period of the disease, it being no uncommon thing to bring them all the way from Virginia to New York. At present, at the New York hospitals, patients who had had little or no attention before, were frequently brought in at a late period of the disease, when the chances were all against them. Another point worthy of note, was that Liebermeister and some others left out of their statistics all mention of the ages of the patients. The age made a very great difference in the mortality; since among the young the results were almost always good, while among the old, and even in all those over twenty years old, the reverse of this was likely to be true. In the hospital in New York which had been quoted by Dr. Peabody as having the smallest mortality, the favorable result was due principally to the fact that a considerable number of children with the disease had been treated in that institution. In the statistics of military hospitals the matter of age was not so important; but even in these it was necessary to be very guarded, because it was highly desirable to know all the concurring circumstances. During the war, patients were frequently transported for long distances in the second and third periods, when in private practice the patient would not be permitted to make the slightest exertion.

He had nothing to say against the antipyretic treatment of typhoid fever; but at the same time, he believed that very favorable results were often obtained under what was known as the expectant plan. At an outbreak at the deaf and dumb asylum a number of years ago, when the antipyretic treatment was unknown, he had treated fifty cases, with only two deaths; a mortality of four per cent. In another institution a similar good result was obtained, and he believed it was mainly due to the fact that the patients were young subjects. In Europe the authorities almost invariably left out from their statistics all those patients who died within a few hours after their admission to the hospital; which left the statistics of hospitals in this country (where such was not the practice) at a considerable disadvantage. For himself, he was a believer in the antipyretic treatment; but thought that the cold water should be used with special reference to the circumstances and character of the case. In the case of one young lady under his care, even cold sponging rendered her blue to the second phalanx of the fingers; and here he had resorted to the water-coil. Its action had not been very satisfactory, but it was the best that he could do under the circumstances, and the patient recovered; although she might perhaps have done so had no antipyretic treatment been used.

In regard to the matter of diet, he thought that more care ought to be used. One young man that he knew of, who was completely convalescent, and who had not been allowed to sit up at all until a week after all fever had subsided, at the end of a month from the time when the fever left, ate a quantity of nuts with some hard German bread. Within twenty-four hours there was probable perforation of the intestines, followed by peritonitis; showing that an atonic ulcer had probably still remained in the bowel. In regard to the eating of meat, however, considerable latitude might be allowed, and some time ago a Kentucky physician advised a meat diet all through the course of the disease. But still, while there was any doubt about the matter, it was advisable to adhere to a very careful diet. In the division of Bellevue Hospital to which he, as well as Prof. Flint, was attached, systematic refrigeration by cold water had been practised for several years.

DR. AUSTIN FLINT, SR., said that the Association was certainly to be congratulated in having presented to it two such admirable papers on typhoid fever as those of Dr. Janeway and Dr. Peabody. In regard to the views expressed in the latter, he differed from the writer in only one point, and that not a very important one. This was in regard to the value of cold sponging. His observation had led him to believe that sponging, if properly carried out, was a very efficient means of reducing temperature; but it was essential that it should be very thoroughly performed. Like Dr. Peabody, he had formerly had a portable bath-tub fitted up for use in the hospital wards, but he had found the bathing a very inconvenient method, and his experience went to show that all the advantages of the full bath could be obtained in other ways more easily followed out. In any case when sponging did not answer the purpose, he was in the habit of using the cold pack, wrapping the patient in a sheet and then sprinkling cold water over it; and for several years he had practised this method with advantage. He had therefore dispensed with the cumbersome bath-tub. He agreed with Dr. Peabody in the opinion that solid food should be given at a comparatively early period, and thought that it was a good rule to let the patient have it as soon as he himself desired it. It had been claimed that iodine and calomel cut short or cured typhoid fever; but he did not believe that as yet we had any specific for this disease, and until one had been discovered, it was necessary to treat

every case in accordance with the special character of the symptoms present. In regard to the administration of alcohol, he had passed through three phases of opinion on the matter. When he first began the practice of medicine no alcohol whatever was allowed, and the patient was starved as far as possible. Later, there came a revulsion of feeling in regard to it, and it was employed to excess; while at the present time there seemed to be a tendency, he thought, not to appreciate the very great advantages of the free use of alcohol in appropriate cases.

Dr. Peabody said that besides the objection to the suggestion of Dr. Flint, Jr., mentioned by Dr. Detmold, there was an additional one, viz., the difficulty of getting the patient to take the kind of food recommended. It was well known how hard it was to get typhoid fever patients to take a sufficient quantity of nourishment under any circumstances, and he was positively certain that they would object very strongly to taking sweet or greasy articles. In regard to Dr. Janeway's criticism upon European statistics, as regards the age of patients and the stage of the disease when treatment was commenced, he thought that, as a rule, the same would apply also to hospital statistics in this country, where these facts were as little determined as abroad. As to the exigencies of war causing a higher rate of mortality, the death-rate from typhoid fever among the white troops the year after the late war amounted to forty-nine per cent. As to the efficacy of cold sponging and the cold pack, he wished to say that, paradoxical as it might appear, he agreed with Professor Flint. When the sponging was thoroughly carried out, he believed that it was efficient; but the trouble was that, as a rule, it was *not* properly performed. In the special case to which he had referred there was a trained nurse who was considered properly qualified for the position in all particulars, and yet the temperature had remained unaffected. He had, therefore, urged the use of the full cold bath as the most efficient means of reducing temperature in the average case of typhoid fever.

THE CORRECTION OF DEFORMITIES BY MODIFICATIONS OF THE THICKNESS OF THE SOLE OF THE SHOE.

The President made some remarks, illustrated by diagrams on the blackboard, on the correction of certain deformities in the young by the simple device of thickening the inside or outside edge of the sole of the shoe, as required. In weak ankles, which were exceedingly common among girls, owing to the breadth of the pelvis, which gave a tendency toward knock-knee, there was always a protrusion of the internal malleolus. This was ordinarily treated by placing a certain amount of stiffening on the inner side of the shoe, and, this failing, by the use of iron splints. The simplest and best way of correcting the deformity, however, was by making the inner side of the sole thicker than the outer, which had the effect of lifting the weight off of that portion of the skeleton. The same method answered for the correction of knock-knee, but when the child was bow-legged, the thickening was to be placed on the outer instead of the inner side of the sole. If one leg was shorter than the other, there would inevitably result more or less tilting of the pelvis; which had the effect in time of producing lateral curvature of the spine, with its secondary or compensating curvature. This could easily be remedied, when taken in time, by making the sole of the shoe for the foot of the shorter limb sufficiently thick to bring the transverse axis of the pelvis at right angles to the lower extremities. Dr. Detmold also explained his method of treating flat-foot (which was common in young girls who were poorly nourished and who were obliged to remain in a standing position much of the time), as well as elevation of one shoulder above the other. In five out of every nine young girls, he thought, the right shoulder was a little higher than the left.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, March 11, 1884.

The President, R. F. Weir, M.D., in the Chair.

TRAUMATIC RUPTURE OF THE TRACHEA.

Dr. J. L. Little presented a trachea removed from a man sixty years of age, who died in St. Vincent's Hospital, having been struck in the neck and upper part of the sternum on Saturday last, by one of the shafts of a truck. When he first saw the case, five hours after the injury, he found the patient emphysematous from the head to the lower part of the abdomen. There was considerable ecchymosis over the sternum. No difficulty in breathing. No cough or pain on pressure over the upper part of the sternum and trachea. Had had slight expectoration of blood before entering the hospital. The emphysema was greater over the chest than elsewhere, and less about the neck. Injury of the trachea was suspected. The patient was anæsthetized and a careful examination was made over the trachea and larynx, but no injury of these parts could be detected, and, as there were no symptoms of suffocation, it was thought best not to perform tracheotomy. He, however, gradually sank and died this morning, sixty hours after the injury. There was considerable cyanosis during the last twelve hours, but no symptoms of suffocation.

The autopsy showed a complete separation of the fourth and fifth rings of the trachea, with signs of recent inflammation and hemorrhage in the surrounding tissues. Double hypostatic pneumonia and pleurisy also existed.

FLOATING CARTILAGE IN THE KNEE-JOINT; REMOVAL.

Dr. Little also presented a specimen of floating cartilage, which he removed from the knee-joint of a patient who came under observation three weeks ago, having suffered from a slight pain in the knee for ten years. About six weeks ago, he noticed symptoms for the first time, indicating the presence of a loose cartilage, and on examination a movable body was discovered which was quite prominent. On the 28th of February last, Dr. Little removed it under strict antiseptic precautions.

The operation was performed as follows: A bandage was applied from the leg to a point just above the patella, so as to keep the loose cartilage in the upper part of the joint. It was then fixed at a point on the outer side of the joint by a strong acupressure needle passed through the tissues. An incision was made, and it was removed with a pair of bullet-forceps. The edges of the wound were brought together by two catgut sutures. The synovial membrane was not included in

the sutures. A compress of iodoform gauze and a full Lister dressing were applied.

Patient did well until the morning of the fourth day, when he had a chill and a sudden rise of temperature (102°). On removing the sutures, about half an ounce of pus escaped from the wound. The synovial cavity was found to be slightly distended, but no fluid could be pressed from the joint through the wound. Believing that the collection of pus was external to the joint, he redressed it; in a few hours the temperature subsided, and in forty-eight hours the effusion disappeared from the joint, and the patient made a rapid recovery.

DR. W. T. BULL had removed three of these cartilages. In two cases he put in no sutures, and the result was satisfactory. In the third case he used sutures, and the man had a very troublesome effusion, which lasted for six months, coming and going. He employed catgut sutures, and they were introduced through the capsule.

DR. SANDS had performed, within the last six months, three operations upon the same patient; the right knee being operated upon twice, and the left knee once. In each case the operation was performed in the same way, the joint being directly incised, and the edges of the cutaneous wound being united by sutures after the removal of the floating cartilage. Bichloride solution was the antiseptic employed, and peat was used as a dressing. In all the cases primary union took place without rise of temperature, and without effusion into the joint.

DR. A. G. GERSTER had also had occasion to operate upon three patients, in two of whom there were three movable bodies, one of which could be proved to be chipped off from the tibia; the second was a smooth almond-shaped body, the origin of which could not be ascertained; the third he was obliged to manipulate for considerably, and it was found that several small bodies were attached by pedicle to the ligamentum alare near the inner margin of the patella. These growths had to be extirpated from their attachments, and it became necessary to tilt up the patella and expose its under surface for this purpose. In all three cases the joint was washed with a five per cent. carbolic solution, it being before the advent of the bichloride solution. In all of the cases a supporting suture was applied through the capsule, and after that skin stitches were introduced, and in every case a drainage-tube of small calibre was left in the joint for the purpose of removing as much effusion as might take place, but this tube was removed on the fourth day. In all the cases the dressings were antiseptic and recoveries were uninterrupted.

THE PRESIDENT had an instance brought to mind by Dr. Gerster's last case, that is, the presence of fatty growths in joints. Last autumn he cut into the knee-joint for the removal of a loose cartilage, situated on the inside of the patella, movable in various directions, but attached somewhere in the region of the patella, and about the size, as felt through the skin, of the end of his little finger. On reaching it, it was recognized as being not of the usual cartilage formation, but softer; and, subsequently, on microscopical examination it proved to be fibrous tissue with fat. It was analogous to the fatty growths which Barwell had described, and had removed successfully from the knee-joint; and Volkmann also speaks of similar troubles in the same joint. In his case considerable manipulation of the joint was resorted to in the removal of the foreign body, and although antiseptic precautions were used, the wound and the joint washed out with sublimate solution (1 to 5000), and a drainage-tube inserted, the case went to the bad, and suppuration of the joint and of the tissues about the articulation took place; threatening septicæmia developed, necessitating amputation of the thigh, which was done after Neuber's method, with rapid healing. The process of inflammation had, however, so destroyed the tissues of the joint that he was unable to demonstrate anything further concerning the connection which this peculiar formation had with the joint itself, although it was evidently a hypertrophy of the subpatellar fatty tissues.

He had, also, since met with one other case of this kind, but he did not operate upon it. He saw last week at his college clinic, a woman about fifty years of age, who had had symptoms of floating cartilage during the last twenty years. The body was quite large, and was situated at the inner and upper aspect of the joint, and from the symptoms and from the attacks of its catching between the articular surfaces, he assumed that it was attached by a somewhat long pedicle. The patient was unwilling to have an operation performed, because she suffered but little, and the permanent joint damage was not marked. The special interest in the case was the rather long time for such a difficulty to exist without serious impairment of the joint.

DR. GERSTER asked Dr. Little if he applied a posterior splint after his operation.

DR. LITTLE said that he had neglected to state that he applied a posterior splint after the operation, so that the joint was kept perfectly quiet.

THE PRESIDENT had employed a splint and also used firm compression, after opening the knee-joint.

DR. SANDS said that in his three cases the limb was placed, after the operation, upon a posterior splint, and the dressing was not removed for two weeks.

DR. BULL said that in all his cases he used the typical Lister dressing and a posterior splint.

DR. GERSTER said that he also applied a splint in all his cases.

EPITHELIOMA OF THE LARYNX.

DR. MCBURNEY presented a specimen with the following history: It was removed from a male patient, fifty-nine years of age, who first exhibited symptoms of disease four months ago, the first being the discovery of a small swelling in the right side of the neck beneath the angle of the jaw. It was not until the end of January that any dysphagia was noticed, but there was no dyspnœa. When he came under Dr. McBurney's observation in February, the man had a large tumor on the right side of the neck, extending from the angle of the jaw nearly to the clavicle. He was able to speak with quite a clear voice, complaining almost not at all of difficulty of swallowing, although at times of some difficulty in swallowing solid food. On examination with the laryngoscope, Dr. McBurney was able to see a large mass apparently filling the entire lumen of the larynx, and the appearance was such that he was unable to account for the excellent voice. He had no means of determining the extent of the growth, although its appearance indicated that it extended down the œsophagus. The patient died on Friday last. He swallowed

fairly well up to that time, although there had been steadily increasing dysphagia. The voice remained very good until death. The specimen showed that the true vocal cords were entirely unimpaired.

Dr. McBurney also presented the specimen removed from the neck, which was probably carcinomatous, although the microscopical examination had not been completed. The most interesting feature perhaps was the condition of the artery seen upon the back of the specimen, where, near its bifurcation, endarteritis obliterans was apparent, and the vessel just above was firmly attached to the tumor. There was no direct positive union of the two tumors, but he inferred that the laryngeal was the original growth, and that the tumor in the neck was secondary, and one which began in the lymphatic glands.

EPITHELIOMA OF THE CERVIX; EXTIRPATION OF THE ENTIRE UTERUS THROUGH THE VAGINA; RECOVERY.

Dr. W. T. Bull presented a uterus which was the seat of cancer, involving the greater part of the cervix. It was removed by the vaginal method on the 17th of February, 1883, from a patient forty-five years of age, who had had symptoms of uterine cancer one year previous to admission to the hospital. At the time of admission, the growth formed a large cauliflower excrescence at the upper part of the vagina, and apparently did not involve the body of the uterus. She had not received any treatment. The urine had a specific gravity of 1020, was acid, contained a little albumen and a few hyaline casts. The uterus was removed by Czerny's method without difficulty, although the operation was laborious and long from the care required to dissect the expanded cervix from the base of the bladder. The broad ligaments on either side were secured with two carbolized silk ligatures and cut between them. The peritoneal wound was loosely held together with four or five sutures. Just before the time the sutures were introduced, a mass of intestine or omentum could be seen at the bottom of the wound. In passing the sutures through the peritoneum, hemorrhage occurred from one of the broad ligaments, which was controlled by the hæmostatic forceps, and it was necessary to leave the instrument in position. The wounded surfaces were dusted lightly with iodoform, the vagina was packed with small iodoform peat bags, and the vulva covered with borated cotton. There was but slight reaction, and, at the end of five days the first dressing was made, and while there was more or less discharge, there was no evidence of decomposition whatever. At that time the hæmostatic forceps were removed. The further progress of the case was rapid; at the end of one month the patient was able to sit up, and soon afterward left the hospital. For eight months afterward the patient continued in very much better health than she had enjoyed for years previous to the operation, and believed herself to be cured. There remained, however, a small spot at the top of the vagina which was not disposed to heal, although her general condition was quite good. About nine months after the operation there appeared a hard nodule on the posterior vaginal wall, which was removed with the curette, together with the small spot previously noticed. For a month afterwards the condition of the parts remained unchanged. From the tenth month after the first operation up to the present time, the patient's health has slowly declined, and now, nearly thirteen months after the first operation, she is worse than at the time she first entered the hospital. She has a pelvic tumor about the size of a child's head, and has the distressing abdominal symptoms which usually accompany this condition, yet there has been no offensive discharge from the vagina, nor hemorrhage.

In two other cases he had attempted the same operation, and, being unable to get the uterus out with safety, had simply contented himself with the effort to remove as much as possible after dissecting the tumor from the bladder and rectum, without opening the peritoneal cavity. Both patients recovered rapidly from the operation, although in one the cul-de-sac of Douglas was accidentally opened. He thought the operations had been of much benefit to the patient, especially with reference to getting rid of the offensive discharges and hemorrhages which almost invariably accompany cancer of the uterus. One woman, who had several hemorrhages before the operation, went six months without any bleeding or abundant discharge, and died a year afterwards. The other had been operated on but a few weeks ago.

Dr. Lange said that he had presented to the Society one patient from whom he had extirpated the uterus totally for sarcoma two years ago. About six weeks ago he saw the patient, and she was apparently entirely healthy. In two other cases in which he had performed the supravaginal amputation—one for a very large myosarcoma and the other for a large fibroma—the patients were still quite well; one sixteen months after the operation, and the other nine or ten months after the operation.

SARCOMA OF KIDNEY.

Dr. J. L. Little presented a specimen which he removed at St. Luke's Hospital by operation on September 11, 1883, from a girl four years old. According to the mother's statement the child's abdomen had been swollen and hard from birth. One month previous to admission this enlargement began to increase rapidly. On examination the abdomen was found to be greatly distended, very tense and fluctuating, and the subcutaneous veins over the surface were enlarged. The enlargement of the abdomen was so great that it prevented the child from walking or standing. There was marked dulness on percussion over the right side of the abdomen extending several inches beyond the median line. From this point it was tympanitic; a distinct tumor could be felt occupying the entire region of dulness, extending upwards to the margin of the ribs. There was no œdema of the feet. The urine was normal, and the child's general health was good.

On September 15th the tumor was aspirated, and about eight ounces of dark-red fluid were removed. On examination it was found to contain blood globules, but no further evidence as to the character of the disease was revealed.

A consultation was held, which resulted in a diagnosis of a cyst, probably connected with the kidney—hydro-nephrosis; and an explorative incision was advised.

On September 25, Dr. Little performed the following operation under strict antiseptic precautions: He opened the abdominal cavity by an incision two or three inches

long between the umbilicus and pubis, which was subsequently enlarged. A considerable quantity of fluid at once made its escape from the abdominal cavity. The tumor was found situated beneath the posterior layer of the peritoneum, extending from the pelvis up to the borders of the ninth or tenth rib, and overlapping the spinal column. A large trocar was passed into the most prominent part and nearly two quarts of a dark-colored fluid were evacuated. It was then found that the upper portion of the tumor was solid. The peritoneum covering the tumor was then opened and the growth carefully enucleated. Its upper part was found to be in such intimate connection with the kidney that it was necessary to remove that organ. A ligature was passed around the renal vessels and the whole mass was removed. The hemorrhage during the operation was not great, and was readily controlled. The peritoneum was closed by catgut, and the abdominal wound by silver wire sutures, and Lister's dressings were applied. The condition of the patient during the later part of the operation was very feeble, and, although every means to bring on a reaction were used, she died from shock about half an hour after the completion of the operation.

Microscopical examination of the tumor was made by Dr. Frank Ferguson:

Small round-celled sarcoma with cysts. The tumor arises from the anterior aspect of the lower end of the right kidney. Its shape is spheroidal, and it measures six inches in diameter. It is surrounded by a fibrous capsule, rich in small round and spindle-form elements, and continuous with the capsule of the kidney. There are numerous cysts of various sizes throughout the tumor, into some of which hemorrhage has occurred; but, as a rule, their contents are a clear serum-like fluid, rich in albumen, and a few of the small round cells of which the tumor is composed. In these cysts are also found kidney tubules and glomeruli. Kidney structure is also seen throughout the tumor. The cells which compose the tumor are supported by a delicate framework of fibrillated material; and the entire tumor is rich in its vascular supply. The kidney is slightly larger than in subjects of this age, and, on microscopic examination, normal in structure beyond the line of invasion of the morbid growth.

Stated Meeting, March 25, 1887.

THE VICE-PRESIDENT, CHARLES MCBURNEY, M.D., IN THE CHAIR.

LARGE TUMOR OF THE THIGH.

DR. JAMES L. LITTLE presented a patient, a man, forty-eight years of age, whose horse reared and fell upon him while in the army, twenty years ago, the pommel of the saddle inflicting a contusion on the inner aspect and about the middle part of the left thigh. An inflammatory swelling followed, which lasted from the twenty-third of June until winter, and then disappeared entirely. Five years afterward, a swelling occurred up and down the thigh, along the site of the original injury, which gradually increased until it reached the present size. The circumference of the right thigh was nineteen inches; the circumference of the left thigh around the tumor was thirty-one and a half inches. It was a painless, movable swelling, which Dr. Little regarded as a lipoma, and also thought it was a proper case for operation.

DR. A. G. GERSTER inquired whether the tumor had been punctured, and the patient replied that only small needles had been introduced, but the aspirator had not been used. Dr. Gerster continued, and recalled the case of a tumor of this kind, situated in the same locality, that came under his observation at Mt. Sinai Hospital, four years ago, in which the diagnosis of cyst was made after puncture, but it finally proved to be an old abscess.

It seemed to him that the tumor in Dr. Little's case was pretty well outlined by the entire extent of the adductor muscles. He was unable to find any lobulation, such as usually exists in lipoma, and he believed that in order to make the diagnosis clear it would be very important to make puncture. The contents of the tumor to which he referred contained an enormous quantity of cholesterine crystals. It had occupied five years in developing; its growth was very gradual, and there was an early history of very severe pain in the thigh. Excision of the tumor was attempted, and when he reached what was supposed to be the capsule, it was found to be simply a pyogenic membrane, closely attached to the inner surface of the adductor muscles. A very large quantity of peculiar shining liquid was evacuated, which contained cholesterine crystals and detritus. Samples of the fluid removed by puncture prior to the operation were submitted to two microscopists, one of whom diagnosed undoubted ovarian tumor. After having evacuated the contents, he found floating in the cavity a small solid body, which was found to be a portion of the cortical substance of the femur from the vicinity of the small trochanter, and examination of that locality revealed a slight depression. He concluded that a cortical necrosis with myelitis took place five or six years ago, and that a sequestrum was released and became the point around which an abscess formed, and that the original site of the osteomyelitis had healed, and the cold abscess continued to exist with its pyogenic membrane, which gradually increased to the size of the apparent growth. The man recovered entirely.

DR. LITTLE said that he operated on a tumor of the thigh, similar to the one described by Dr. Gerster, in February last, which was very large, and which moved with every movement of the muscles. Upon tapping it, a shining, yellow fluid was removed, which was filled with cholesterine crystals. The sac was laid open and the inner surface of the cyst was found to be covered with granulating material, which was scraped off, and the case did well. It was supposed to be the result of an old abscess. Antiseptic precautions were used.

DR. T. M. MARKOE said that from the feel of the growth he should doubt whether it was a cystic tumor. He found that it was beneath the fascia lata, and that it was continuous with the adductor tendons below, which passed internal to the tumor and formed a part of its internal surface: that fact alone would induce him to doubt whether it was a fatty tumor. Another feature which led him to doubt as to its being a fatty tumor was the fact that no corrugation of the surface was seen when it was pressed together—a feature almost characteristic of lipomatous growths. He was inclined to regard it as a form of sarcoma.

DR. GERSTER thought that the length of time which

the tumor had existed spoke against the sarcomatous character of the growth, and there was also a notable absence of any systemic disturbance.

Dr. Little remarked that he had removed one fatty tumor much larger than this one, situated in the same locality.

Dr. Briddon said that that some ten or fifteen years ago he saw a tumor like this in the gluteal region, which was influenced by some of the muscles arising from the pelvis and inserted into the femur. In that case he used the aspirator, as he thought, for the first time it was used for this purpose in this city, and the results were negative. Supposing it to be a fatty tumor, he made a long incision for its removal, but it turned out to be an abscess with a very thick covering, which prevented fluctuation from being detected.

Dr. Markoe said that a form of tumor had been described by Paget as fibro-cellular, the histological type of which was loose, areolar cellular tissue infiltrated with serum, etc., which may attain an enormous size and yet possess none of the elements of malignancy. He thought the tumor in Dr. Little's case corresponded more nearly to that form of growth than to any other.

CORRESPONDENCE.

LIME INHALATIONS IN DIPHTHERIA.

To the Editor of The Medical News.

Sir: Having seen lime inhalations used on several occasions, both in diphtheria and membranous croup, and being convinced of their value, I was surprised by the remark of Dr. Kolipinski, in the number of The Medical News for March 22, that the value of the treatment depended upon the vapor of hot water.

To prove the correctness of this statement I made the following experiment: A wide-mouthed glass bottle, containing unslaked lime and a sufficient quantity of water, was rapidly corked and connected by a glass tube, in the usual manner, with a beaker containing a solution of carbonate of sodium. The vapor arising from the slaking lime was passed through the solution of the alkaline carbonate, but no white precipitate was produced, proving the absence of lime. The same experiment was repeated, a solution of oxalic acid being substituted for that of the carbonate, but no precipitate of oxalate of lime formed.

It may be claimed by some that lime is carried along by the vapor in the form of a powder, and thus comes in contact with the exudations of the fauces and air-passages, but the glass tubes used in these experiments were of good size, and any particles of lime which might have been carried along, mechanically, with the vapor, could readily have passed through the tube, but no sediment of any kind was noticed in the solution either of the carbonate or the acid.

The fact, however, remains that the vapor of hot water is of great benefit in the treatment of diphtheria and membranous crup, but some more convenient ways of generating steam for inhalation may often be at hand than the method of producing it by the slaking of lime.

Respectfully,

Bernard Persh, M.D.,
Hospital Steward, U. S. A.

The Frankford Arsenal, Pa.,
March 26, 1884.

THE LOCAL TREATMENT OF ERYSIPELAS.

To the Editor of The Medical News.

Sir: The March number of the *College and Clinical Record* contains the report of a clinic of Professor Bartholow, in which, with reference to the local treatment of facial erysipelas, and the various applications that have been used, he says: "We cannot, as a rule, prevent the spread of the disease by the remedies mentioned. We cannot prevent or limit, by such measures, the constitutional condition." For several years I have used a mixture of salicylic acid (Squibb) one drachm to glycerine and rose-water each half an ounce, applied with a camel's-hair pencil frequently and thoroughly over the affected parts, taking care to cover well beyond the line of demarcation. I have a record of quite a number of cases treated in this way, and in every instance the first or second application was sufficient to check the spread of the disease. The only internal treatment used was some saline water or mixture.

Yours very truly,

H. M. Shallenberger, M.D.

Rochester, Pa., March 28, 1884.

THE DISCOVERER OF THE MICROCOCCUS OF SWINE-PLAGUE.

To the Editor of The Medical News.

Sir: In your number of March 15th, attention is called to an article by Dr. D. E. Salmon, in *Science*, in which it is claimed that Pasteur was wrong in acknowledging Dr. H. I. Detmers as the first discoverer of the swine-plague parasites. Dr. Salmon's paper in *Science* does such injustice to the merits of Dr. Detmers, that it seems incumbent upon his friends to vindicate the latter investigator's title of priority.

Dr. Klein, of London, described, in his first article, micrococci in the bodies of dead pigs, the description of which agrees with the observations of later authors. But he did not prove these micro-organisms to be the cause of the disease. This proof was furnished for the first time, by Detmers, in 1878, in the Special Report of the United States Commissioner of Agriculture (No. 12, p. 37, etc., and Annual Report, 1878, p. 347). He found invariably a specific kind of bacteria in the fluids and diseased tissues of the animals just killed. He obtained growing cultures of these bacteria in sterilized fluids out of the body, and, by inoculation with traces of these cultures, he reproduced the typical hog-cholera in previously healthy pigs. Since all precautions necessary to render such experiments faultless were fully carried out, no flaw can be detected in Detmers's demonstration of the bacterial origin of the disease. He did, however, commit a mistake in the description of, and name given to, the parasites. He termed them "moniliform bacilli;" for, with his insufficient lenses, they appeared as serrated rods. Better instruments resolved them subsequently into diplococci and coccus-chains. The error in the botanical description of the bacteria was hence corrected in the following year (Special Report No. 22, p. 60, and Annual Report, 1879, p. 412). The description of the characteristic mode of grouping, and the drawings of the parasites in these first two reports, as well as in the later one of 1880, show that Dr. Detmers really dealt with the same micro-organisms in all these instances.

Since Dr. Salmon did not mention the existence of swine-plague bacteria in any of his articles prior to December, 1880 (Special Report, No. 34), and since in this first account of his, no results are brought forth in advance of what Detmers had discovered one or two years previously, the injustice to Dr. Detmers is manifest.

Respectfully yours,

H. GRADLE, M.D.

CHICAGO, March 20, 1884

NEWS ITEMS.

CHICAGO.

(From our Special Correspondent.)

THE COMMENCEMENT OF THE CHICAGO MEDICAL COLLEGE took place in the Grand Opera House on March 25th. The graduating class consisted of thirty-nine members.

The Dean, Dr. N. S. Davis, made some remarks in view of the twenty-fifth anniversary of the institution. He vindicated for it the honor of having been the first American medical college that introduced the graded system of instruction.

From its start this College was the only one, for twelve years, that did not repeat to the same class of students the same annual course of lectures, both elementary and advanced. Twelve years later Harvard College imitated this system, and was then followed by the University of Pennsylvania and a host of other institutions of medical learning.

The college, beginning twenty-five years ago with a modest class of thirty students and nine graduates, has since had 2773 matriculants and sent out 863 graduates.

THE SIXTH REPORT OF THE GERMAN CHOLERA COMMISSION.—The following is the text of the sixth and concluding report of the German Cholera Commission :

The question whether the bacilli found in the bowel of cholera patients are parasites belonging exclusively to cholera, which was left undecided in my last report, can now be looked upon as settled.

At first, on account of the varying pathological appearances presented by the bowel in cholera, and on account of the large number of bacteria always found therein, it was extraordinarily difficult to discover the truth. In most cases death does not occur at the height of the cholera process, but in the reaction-period which follows immediately after, and in which such considerable changes take place in the bowel and its contents, that it is impossible from such cases alone to obtain a clear idea of the cholera process. It is not until one has had the opportunity of examining a number of uncomplicated cases, and of comparing with them cases recently attacked, that one can succeed in obtaining a true insight into the pathological relations of cholera. For this reason it was thought right to exercise the greatest caution in interpreting the discoveries made with regard to bacteria in cholera, and to reserve a definite judgment on their causal relation to the disease until we had fully made up our minds on the subject.

In the last report I was able to state that peculiar characters had been found in the bacilli tenanting the cholera bowel, by which they could be distinguished with certainty from other bacteria. Of these features the following are the most characteristic: The bacilli are not quite like a straight line as other bacilli, but a little curved, like a comma. This curving may even be so marked that the bacilli assume almost a semicircular outline. In pure cultivations these curved bacilli often give rise to S-shaped forms, and to wavy lines of varying length, the former of which correspond to two individuals, and the latter to a considerable number of the cholera bacilli, which have remained in connection as they continued to proliferate. They possess, moreover, movements which are very active, and may be best observed in a drop of the cultivation solution suspended from a covering glass. In such a case one sees the bacilli swim across the field of the microscope with great rapidity in all directions.

Their behavior on gelatine is peculiarly characteristic. They form colorless colonies which, at first, look as if they were composed of tiny glittering fragments of glass. Gradually these colonies cause the gelatine to melt, and then spread themselves out to a moderate extent. In gelatine cultivations, therefore, this peculiar appearance enables one to distinguish them from other colonies of bacteria with great certainty, and to isolate them from the latter with ease. They can, moreover, be demonstrated with comparative certainty by cultivation on concave slides, as they always betake themselves to the margin of the drop of cultivation liquid, and can there be recognized by their peculiar movements, and, after staining with aniline, by their comma-like shape.

So far, twenty-two cholera cadavers and seventeen cholera patients have come under examination in Calcutta. All these cases were examined for the presence of the specific bacteria, both by the help of gelatine cultivations and also by microscopical preparations, and, in most cases, by cultivation on concave slides; the comma-like bacilli were found in all, without an exception.

This result, taken together with that obtained in Egypt, justifies the conclusion that this kind of bacterium uniformly occurs in the cholera bowel.

With the view of controlling the result, there were examined in exactly the same manner twenty-eight other cadavers (including eleven dead from dysentery), and also the evacuations of a case of simple diarrhœa, of dysentery, and of a healthy patient who had recovered from cholera, besides various animals, both healthy ones and others which had died of ulceration of the bowel and pneumonia; and lastly, we also examined water contaminated with putrid masses. In not a single case, however, did we succeed in demonstrating the cholera bacilli, either in the stomach or bowel of the cadavers, or in the evacuations, or in the other fluids, rich as they were in bacteria. As a disease process very similar to cholera is produced by poisoning with arsenic, an animal, so poisoned, was examined to see if the comma-bacilli were present in the digestive organs, but in this case also the result was negative.

From these results the further conclusion may be drawn, that the comma-like bacilli are altogether peculiar to cholera.

As to the relation of these bacteria to cholera, I have already explained, in a previous report, that either this specific kind of bacterium is specially favored in its growth by the cholera process, and hence combined in

such a striking way with cholera: or that the bacteria are the cause of cholera, and the disease only arises when these specific organisms have found their way into the bowel. The first hypothesis cannot be accepted, for the following reasons: It must be assumed that a man when he sickens with cholera has already this kind of bacterium in his alimentary canal, and further, inasmuch as these peculiar bacteria were found without exception in a comparatively large number of cases both in Egypt and in India, two widely separated countries, it follows that every man must be tenanted by them. This, however, cannot be the case, for, as already stated, the comma-like bacilli have never been found except in cases of cholera.

Even in bowel affections, such as dysentery and enteric catarrh, which so often pass on into cholera, they were absent. It is also to be remarked, that, if these bacteria had been so regularly present in human bodies, they certainly would have been previously observed at some time or other, which is not the case.

As, therefore, the growth of these bacteria in the bowel cannot be produced by cholera, there remains only the second hypothesis, that they are the cause of cholera. That this is indeed the case, a number of other facts attest in an unmistakable manner; above all, their behavior during the disease process. They confine themselves to the organ which is the seat of the disease—the bowel. In vomit they have only been twice recognized, and in both cases both the appearance and the alkaline reaction of the vomited fluid have proved that bowel contents, and with them the bacteria, have obtained access to the stomach. In the bowel itself they conduct themselves as follows: In the first evacuations of patients, and as long as these retain their fecal character, only very few cholera bacilli are found; the subsequent watery, inodorous evacuations, however, contain them in great numbers, all the other forms of bacteria almost completely disappearing from that moment, so that at this stage of the disease, the cholera bacilli form in the bowel almost a pure cultivation. As soon, however, as the attack of cholera subsides and the evacuations again become fecal, the comma-like bacteria gradually disappear from the evacuations, and when the disease has completely passed over, are no more to be found. What is found in cholera cadavers is exactly similar. No cholera bacilli are met with in the stomach. The bowel contains them in varying numbers, according as death has occurred during the cholera attack, or after it. In the most recent cases—in which the bowel presents a uniform bright-red color, the mucous membrane is still free from extravasations of blood, and the contents of the bowel consist of a whitish, inodorous fluid—the cholera bacilli are found in the bowel in enormous quantities, and almost pure. Their distribution corresponds quite accurately to the degree and extension of the inflammatory irritation of the mucous membrane, while in the upper part of the bowel they are not usually so numerous, but increase toward the lower portion of the small intestine. If, on the other hand, death occurs later on, we find the signs of a considerable reaction in the bowel. The mucous membrane is of a dark color; in the lower part of the small intestine it is covered with blood extravasations, and its most superficial layers have often ulcerated away. The contents of the bowel are in this case more or less blood-stained, and, in consequence of renewed development of putrefactive bacteria, are putrid in character and offensive. The cholera bacteria in this stage do not reappear in the contents of the bowel, but they are still present in considerable numbers for some time longer in the tubular glands, and often also in the neighboring tissues, a fact to which attention was first called by the appearance of these peculiar bacteria in the bowel of the Egyptian cholera cases. They are entirely absent only in those cases which die from some sequela, when the cholera attack has quite passed off.

The cholera bacteria behave, then, exactly like all other pathogenic bacteria. They appear exclusively in their own peculiar illness, their first appearance coinciding with the commencement of the disease; they increase in number proportionally to the advance of the disease; and disappear with its decline. Their seat corresponds in like manner with the extension of the disease-process, and their number is, at the height of the disease, so considerable as to be quite sufficient to explain their destructive influence upon the mucous membrane of the bowel.

It would certainly be very desirable to succeed in producing in animals artificially, with these bacteria, a disease analogous to cholera, so that their causal relation to cholera might receive ocular demonstration. In this, however, we have not yet succeeded, and it is even questionable whether success will ever be attained in this direction, because, according to all appearance, animals are insusceptible of the cholera infection. If any species of animal whatever could take the cholera, it would surely have been observed in a reliable manner in Bengal, where the infective material of cholera is met with throughout the year and throughout the land. All inquiries, however, directed to this point have met with a negative result.

Nevertheless, the demonstrative force of the facts given above is not weakened by the failure of the experiments on animals. The same phenomenon meets us, also, in other infective diseases; for instance, in enteric fever and in leprosy, two diseases in which specific bacteria also occur, but which hitherto no one has succeeded in conveying to animals; and yet the mode of appearance of the bacteria in these diseases is such, that they must undoubtedly be regarded as the cause of the disease. The same is true also of the cholera bacteria.

Moreover, the further study of the cholera bacteria has enabled us to recognize several other characteristics which are all in harmony with what is known about the etiology of cholera, and thus must be regarded as an additional confirmation of the correctness of the hypothesis that the bacilli are the cause of cholera.

The most remarkable circumstance relative to this, is the fact that it has been repeatedly observed that when the linen of cholera patients, after being soiled by their dejections, has been kept for twenty-four hours in a moist state, the cholera bacilli are found to have multiplied in a most extraordinary manner. This will account for the well-known fact, that the linen of cholera patients has so often infected those persons who have to do with it. Attention having been called to this observation, further experiments were made, and it was found that the same phenomenon occurred whenever cholera dejections, or the intestinal contents of cholera cadavers, were spread upon linen or blotting paper, kept moist,

and especially upon the surface of damp soil. In twenty-four hours the thin film of mucus was invariably found to be completely converted into a thick mass of cholera bacilli.

Another very important quality of cholera bacteria is that they die off after drying more quickly than almost any other form of bacteria. As a rule, even after three hours' drying, every vestige of life has disappeared.

Another peculiarity is that they will only grow in alkaline cultivation-fluids, even a very small quantity of free acids, which would have no tangible effect on the growth of other bacteria, delaying their development in a striking manner.

In the healthy stomach they perish, which will account for the fact that over and over again it has been found impossible to detect them in the stomach or intestines of animals, which had been fed for a considerable period on cholera bacilli, and then killed. This last characteristic, together with their slight power of resisting drying, explains what daily experience teaches us, viz., that infection so seldom follows upon direct contact with cholera patients or their ejecta. Evidently other peculiar circumstances must be present, in order that the bacilli may be placed in a position to pass through the stomach, and then to produce the cholera processes in the bowel. Possibly, bacilli can pass uninjured through the stomach, when digestion is disturbed, a hypothesis supported by what is seen in all cholera epidemics, and uniformly noted here in India, viz., that those men are especially liable to cholera who are suffering from indigestion. Perhaps, however, some special condition under which these bacteria may occur, and which would be analogous to the persistent condition (*Dauerzustand*) of other bacteria, may enable the cholera bacteria to pass the stomach uninjured.

It is not probable, it is true, that this change consists in the production of persistent spores, for such spores have been found to retain life for months and even years, whereas the cholera poison does not remain active longer than about three to four weeks. Nevertheless, it is quite conceivable, that some other form of persistent condition exists in which the bacilli can remain for some weeks alive in a dried state, and in which they are also in a position to resist the destructive influence of gastric digestion.

The conversion into such a state would then correspond to what Pettenkofer has described as the maturing of the infective matter of cholera. Hitherto we have not succeeded in discovering such a persistent state on the part of the cholera bacilli.—*Medical Times and Gazette*, March 22, 1884.

THE GARFIELD MEMORIAL HOSPITAL.—The staff of the Garfield Memorial Hospital at Washington has been constituted as follows:

Consulting Surgeons.—Drs. Fred. May and N. S. Lincoln.

Consulting Physicians.—Drs. W. W. Johnston, J. Taber Johnson, and A. Y. P. Garnett.

Attending Surgeons.—Drs. C. E. Hagner and J. H. W. Lovejoy.

Ophthalmologist and Otologist.—Dr. Swan M. Burnett.

The Board of Directors hopes to be able to open the hospital in May.

JEFFERSON MEDICAL COLLEGE.—The Annual Commencement of the Jefferson Medical College was held on Saturday March 29th. Two hundred and fifteen graduates received the degree of Doctor in Medicine.

MEMPHIS HOSPITAL MEDICAL COLLEGE.—The annual commencement of the Memphis Hospital Medical College took place on February 29. Diplomas of Doctor in Medicine were conferred upon twenty-three graduates.

THE LITTLE ROCK MEDICAL COLLEGE.—The annual commencement of this College was held on March 3. The degree of M.D. was conferred upon thirteen graduates.

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.—The annual session of this Society will be held in the city of Selma on Tuesday, April 8, and continue four days.

MEDICAL SOCIETY OF THE STATE OF TENNESSEE.—The fifty-first annual meeting of this Society will be held at Chattanooga, on Tuesday, April 8.

RUMFORD CHEMICAL WORKS.—The United States Circuit Court in Maryland has decreed a perpetual injunction against certain parties, restraining them from imitating the labels of the Horsford's Rumford Yeast Powder, and also from using their old bottles.

RITTER VON SCHMERLING'S JUBILEE.—On Monday, March 10th, the fiftieth Doctorate Jubilee of DR. RAINER RITTER VON SCHMERLING was celebrated in Vienna. Congratulatory addresses were made by prominent members of the Vienna Faculty, and by representatives from various scientific and social societies.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending March 22, 1884, indicate that intermittent fever, scarlet fever, and remittent fever have increased, and that inflammation of the kidney and neuralgia have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present at fifteen places, scarlet fever at twenty-three places, and measles at seven places.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 25 TO MARCH 31, 1884.

HAMMOND, JOHN F., *Colonel and Surgeon*, now in New York City on sick leave of absence, will, after the expiration of his sick leave, await orders in that city.—*Par. 8, S. O. 70, A. G. O.*, March 26, 1884.

MEARNS, EDGAR A., *First Lieutenant and Assistant Surgeon*. —Assigned to duty at Fort Verde, A. T.—*Par. 1, S. O. 22, Headquarters Department of Arizona*, March 19, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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ORIGINAL LECTURES.

A COURSE OF LECTURES ON DERMATOLOGY.

Delivered at the University of Pennsylvania during the Session of 1883–1884.

BY LOUIS A. DUHRING, M.D.,
PROFESSOR OF DERMATOLOGY IN THE UNIVERSITY

(Reported by Henry Wile, M.D.)

LECTURE III.

HERPES, MILIARIA, POMPHOLYX, PEMPHIGUS, LICHEN, PRURIGO, ACNE, ACNE ROSACEA.

HERPES may be described as an acute inflammatory disease, consisting of one or of several groups of vesicles, occurring chiefly about the face and genitalia. The eruption, preceded by slight malaise, appears in the form of pin-head and pea-sized vesicles, arranged in clusters, and accompanied by heat and swelling. The vesicles contain clear or cloudy serum, and show no disposition to rupture.

Herpes facialis, familiarly known as *fever blister*, occurs more often about the lips (herpes labialis), and generally accompanies some slight digestive disorder, colds, and fevers. The lesions become dry, form crusts, and disappear, being hardly worthy of treatment.

Herpes progenitalis, another form, occurring about the genitalia, is worthy of attention on account of the possibility of its being confounded with venereal disease. The lesions consist of groups of vesicles, more or less perfectly formed, upon a red base, running an acute course, and accompanied by uneasiness and slight burning, with, sometimes, pain. The chief characteristic of these lesions, as contra-distinguished from those of eczema, is their persistency to retain their form without rupturing. In *herpes præputialis*, in which the lesions are on the inner surface of the prepuce, they may, by rubbing on the glans, become macerated, and give rise to superficial excoriated patches which may easily be mistaken for chancroid. But the fact that the lesions occur in groups, which is not the case in any other vesicular disease other than herpetic diseases, should always prevent such an error of diagnosis. The treatment is simple, consisting of lotions of sulphate of zinc, five grains to the ounce of water, lead-water, diluted aqua ammonia, boric acid; also dusting powders. All forms tend to recover, although recurrences are common. *Herpes gestationis* is a rare herpetic disease resembling eczema, occurring in the latter part of pregnancy. It is sometimes a grave affection. It usually disappears after delivery. It is accompanied by intense itching.

Herpes zoster is an acute inflammatory disease, characterized by groups of vesicles upon inflamed bases, with neuralgic pains. It runs its course in two or three weeks, and between the fifth and tenth day the eruption is at its height, consisting of characteristic groups of yellowish, glistening vesicles, retaining their form, and showing no disposition to rupture. In the old it is more serious than in the young, there being more pain, and the affection in general runs a more serious course. The varieties of the disease are made according to the regions affected. Thus, we have herpes zoster capitis, facialis, nuchæ, brachialis, pectoralis, femoralis, cervico-brachialis, dorso-pectoralis, etc. Occurring about the eye, it may be attended with the loss of that organ. It is generally unilateral, and seldom attacks the same individual twice. The lesions may ulcerate so as to leave scars, which may be distinguished from those of syphilis in that the former are in groups, and, moreover, occur in the line of the nerves.

Among the causes, cold, mechanical violence, unusual exertion, exposure, injuries to nerves, may be enumerated. It is a disease of the nerves and ganglia, consisting of an inflammation, as shown by post-mortem examination. In severe cases, treatment is called for, and positive relief may be sometimes given with the faradic current. General treatment may consist of the administration of saline aperients, iron, and arsenic. Locally, lotions of sulphate of zinc, carbolic acid, Grindelia robusta, flexible collodion and morphia, and the sulphide of zinc lotion, are all of service.

Herpes iris, regarded by some as allied to, or as an advanced stage of, erythema multiforme, may be defined as an acute inflammation characterized by groups of vesicles and vesico-papules, arranged in concentric rings, with a display of variegated colors. The lesions spread peripherally, and their color is sometimes striking, the tints being present in no other disease. It runs an acute course in one or two weeks, attacking, as a rule, the hands and forearms. It occurs generally in spring or fall, and is not contagious. There is little difficulty in distinguishing it from herpes zoster, pemphigus, or erythema multiforme, by the peculiar color of the lesions. Treatment is seldom called for, the lesions disappearing in a few weeks. The parts should be protected from friction, and a sedative lotion used.

MILIARIA is an acute disease of the sweat-glands, the lesions consisting of pin-point and larger vesicles and papules, accompanied by a pricking or tingling sensation. The eruption is abundant, and may occur in successive crops, accompanied or not by sweating. It is met with most frequently in adults or in infancy, especially in the weakly and debilitated. It is common in the tropics, and is also seen in this country and in Europe. The disease must not be confounded with sudamina, in which there is no inflammation. It runs an acute course, followed by slight desquamation. Relapses are common. The treatment consists of saline aperients, diuretics, quinia, and iron, lotions of black wash, lead-water, sulphate of zinc, sulphate of copper, etc.

POMPHOLYX is a disease allied to pemphigus, is rare, and does not possess very striking characteristics. The lesions consist of vesicles and blebs, excoriations with maceration and exfoliation. It occurs mostly about the hands (cheiro-pompholyx), fingers and palms, also the toes and soles of the feet, and is a disease which has

been much discussed in the last ten years. It is a distressing disease, and incapacitates the individual for a period of weeks, there being considerable oozing and exfoliation of epidermis, accompanied by burning.

PEMPHIGUS, either acute or chronic, exists in two varieties, pemphigus vulgaris and pemphigus foliaceus, characterized by the appearance of blebs. It is a rare disease, out of 16,863 cases of diseases of the skin collected by the American Dermatological Association, there being only 14 cases. The lesions come out in successive crops, rupture, and disappear, without leaving any trace. The patient, after a variable time, may sink into a marasmus and die of exhaustion. In pemphigus foliaceus, the blebs do not come to perfection, but break down, giving rise to much moisture, causing maceration and exfoliation of the epidermis.

The causes are attributed to a disturbed nervous system, in some cases in which severe mental strain or depression has existed. The treatment consists in the long-continued use of arsenic in moderate or full doses. Locally, mildly stimulating lotions and ointments, as in the case of vesicular eczema, are useful.

LICHEN RUBER is characterized by pin-head or pea-sized, flat, angular, or pointed, shining and scaly, dull-red papules, which are discrete or confluent, running a chronic course. There are two varieties, plane and acuminate, and these may be slight or severe. In this country, the disease is mild, compared with central Europe. It occurs either localized or diffused, and attacks the hands, forearms, especially the flexor surfaces, the thighs, and trunk in the tracts of the nerves. It is always succeeded by pigmentation. The cause is assigned to nervous influences. It occurs more often in women than in men, and lasts a variable period, usually months. The peculiar appearance of the lesion is sufficient to distinguish the disease. The treatment consists in the administration internally of arsenic, quinine, etc., with regulation of diet, and hygiene. Locally, to allay the itching which is at times an annoying symptom, lotions of tar, carbolic acid, or thymol may be used.

PRURIGO is a disease seldom seen in this country, but it is common in Europe, and especially so in Vienna. It is a chronic inflammatory disease, characterized by small, rounded, numerous discrete, solid, pale-red papules, with thickening and itching. It is liable to be confounded with papular eczema, yet the pale, yellowish color of the lesions, and the fact that they generally attack the extensor surfaces, and occur usually in children, are in most cases sufficient to distinguish it.

LICHEN SCROFULOSUS is a chronic inflammatory disease, characterized by small, reddish or yellowish, grouped, scaly papules, without itching, occurring in scrofulous subjects. It is very rarely encountered in this country. It is observed chiefly in Austria.

ACNE is an important disease on account of its frequency throughout the civilized world. It is sometimes so slight as to be unworthy of notice, while at other times it is extremely disfiguring, running a chronic course and being not infrequently difficult to cure. It may be defined as an inflammatory disease of the sebaceous glands characterized by the formation of papules, tubercles, or pustules, or a combination of these lesions, usually chronic, and occurring, as a rule, about the face.

The face is the common seat of the disease, although it is occasionally found upon the back between and over the shoulders, about the neck, and upon the chest. It is most frequently met with in early life, between the ages of fifteen and twenty-five years. There are two chief varieties—*acne papulosa* and *acne pustulosa*—sometimes occurring together, sometimes alone. A subvariety of the papular form, in which the lesions are small and discrete, is known as *acne punctata*, and a subvariety of the papular or pustular form, in which the lesions are accompanied by marked induration, is called *acne indurata*. Another inflammatory acne is produced by tar and the iodide and bromide of potassium, and is termed *acne artificialis*.

The causes are very numerous. It is met with in both sexes, and occurs most frequently in light-haired subjects. It usually begins at the age of fifteen or sixteen, and runs its course in one or two years, or becomes chronic, and continues five, ten, or more years. Among the causes, general debility, cachexia, anæmia, dyspepsia, constipation, and uterine disorders may be mentioned, the last not so much as is generally supposed. The pathology of the affection consists of an inflammation of a variable grade in and about the sebaceous gland, caused by disordered secretion, tending to the formation of pustules.

The diagnosis offers no difficulty in the majority of cases. The eruptions caused by the administration of the bromide and iodide of potassium may be known by their highly inflammatory character. There are two diseases with which it may be confounded—papular or pustular syphiloderma and variola. The lesions of a papular syphiloderm may or may not be around a sebaceous gland, while in the former the sebaceous gland is always involved. Then, again, in syphilis the papules develop slowly, and may be found in other parts of the body besides the face, while the acne papule develops rapidly, and is localized, as a rule, about the face. To distinguish it from variola, the absence of febrile symptoms is sufficient.

While certain lines of treatment are extremely valuable, there are some cases which prove most rebellious. The general health must engage the attention, and any functional disorder must be corrected. Dyspepsia or constipation not infrequently is present, and saline aperients are indicated, or a mixture known as "mistura ferri acidi," composed as follows:

℞.—Magnesii sulphatis, ... ℥ij.
Ferri sulphatis, ... gr. viij.
Acidi sulphurici diluti, . . . fℨj.
Aquæ menthæ piperitæ, . . fℨiv.

Sig.—One tablespoonful with a gobletful of water before breakfast.

Another similar mixture is the following:

℞.—Magnesii sulphatis, . . . ℥iss.
Potassii bitartratis, . . . ℥ss.
Sulphuris præcipitatis, . . . ʒss.
Glycerinæ, ... fℨss.
Aquæ . . . . . fℨiijss.

Sig.—One tablespoonful with water before breakfast.

Cod-liver oil, iron, arsenic, mineral acids, quinine, and glycerine, are the most useful general remedies. In some cases, especially of the pustular variety, calcium sulphide in doses of one-tenth to one-half grain gives good results; in other cases it is of doubtful value. In

certain cases in which there is a tendency to a hyperæmic state, ergot, in the form of ergotin, three to five grain doses, or the fluid extract, half drachm doses, sometimes acts happily. Arsenic may be used with advantage in cases of the punctate papular variety of the non-inflammatory type. Diet is an important factor in the treatment, and it must be properly regulated. Food and drink have a positive influence in many cases of acne.

Local treatment is always necessary, and in many cases alone suffices to effect a cure. It is usually best to begin with applications of hot water, once or twice a day, the water being dabbed on the part until it becomes red. This may also be used together with soft soap, or, where the skin is sensitive, castile soap. The best soft soap is that which is imported, it should be transparent and free from bits of caustic and other impurities. Another preparation of soap which may be used is "spiritus saponatus kalinus," composed of two parts of soap and one of alcohol, perfumed with some essential oil. To stimulate the circulation of the skin in slugglish acne, friction may be used with sand soap or sulphur soap. All comedones should be expressed, and all pustules laid open with a sharp-pointed bistoury. Where the skin is oily, one of the following lotions may be used.

℞.—Sulphuris præcipitatis, . . . ʒi–ʒiij.
Glycerinæ, ... ʒss.
Adipis benz., ... ʒj.
Ol. rosæ, ... gtt. j.—M.
Sig.—Apply twice a day.

℞.—Sulphuris præcipitatis, . . . ʒj.
Etheris, ... fʒiv.
Alcoholis, ... fʒiijss.—M.
Sig.—Apply morning and evening; shake before using.

℞.—Sulphuris præcipitatis, . . . ʒiv.
Camphoræ, ... gr. x.
Tragacanthæ, ... ℈j.
Aquæ calcis,
Aquæ rosæ, ... āā fʒij.—M.
Sig.—Apply twice a day; shake before using.

Vleminckx's solution, diluted one part to five or ten, is often of value. It is prepared as follows:

℞.—Calcis, ... ℥ss.
Sulphuris sublimati, ... ʒj.
Aquæ, ... fʒx.
Coque ad fʒxj et filtra.

In applying these remedies the patient must take from fifteen minutes to half an hour each time. A valuable agent for the removal of comedones is a paste composed of equal parts of sulphur, glycerine, alcohol, ether, and carbonate of potassium. This is to be rubbed in well, and subsequently washed off with water. Where the sulphur preparations are of no avail, mercurials may be tried. Corrosive sublimate, in an emulsion of almonds, or in a lotion with alcohol and ether, one or two grains to the ounce; also ointment of ammoniated mercury, fifteen to forty grains to the ounce of lard, may be employed. Care must be exercised not to use mercurials in connection with sulphur preparations, or while giving internal medicines containing sulphur, which are eliminated through the skin, *e. g.*, calcium sulphide, as the skin becomes discolored by the formation of sulphide of mercury.

Acne rosacea may be defined as a chronic hyperæmic or inflammatory disease of the face, characterized by redness, dilatation of bloodvessels, hypertrophy, and acne. There are three stages of the disease: 1. Hyperæmia; 2. Hyperæmia with dilatation; 3. Hypertrophy. The course of the disease is chronic, and the onset is gradual. The face is the seat of the affection, and the part usually attacked is the nose, either the tip or about the alæ. Both sexes are liable, but in men it is usually more severe; in females it seldom goes beyond the second stage. In the third stage there is a new growth of tissue and bloodvessels, and the nose becomes increased in size, giving rise to the so-called rhinophyma, or "pound-nose" of German authors. The subjective symptoms are variable, though seldom marked.

The causes are numerous and diverse. Anæmia and chlorosis and menstrual disorder in women, nervous affections, excessive indulgence in alcoholic liquors, repeated and prolonged exposure to cold, etc., all act as exciting causes.

The first stage is due to a venous congestion which causes stasis, and gives rise to the hyperæmia. After a time, the congestion continuing, the walls of the bloodvessels yield to the abnormal strain, and dilatation is effected, and the second stage is established. The passive congestion gives rise to the formation of new connective tissue, in which again new bloodvessels are formed, which cause the part to increase in size, even becoming lobulated, producing the third stage of the disease.

It may be confounded with the tubercular syphiloderm, yet its chronicity is sufficient to distinguish it, together with absence of ulceration. From lupus vulgaris it may be differentiated by the absence of the characteristic yellowish or reddish lupus tubercles and the cicatrices. It may also be mistaken for lupus erythematosus, especially when the latter disease occurs on the nose; but there the fine scales, with minute prolongations extending into the ducts of the sebaceous glands, are usually sufficient to establish the diagnosis.

In the treatment, the same class of remedies may be employed as in simple acne. In the first two stages, ergot is sometimes of value. Linear scarification will in many cases reduce the redness; also electrolysis, by obliterating the bloodvessels. Carbolic acid, one part to three or four of alcohol, is often of service. Where there is much hypertrophy, ablation by the knife or cautery is the only efficient mode of treatment.

ORIGINAL ARTICLES.

COD-LIVER OIL, COMBINED WITH THE MURIATES OF AMMONIUM AND SODIUM.[1]

By JOHN P. CURLEY, M.D.,
VISITING PHYSICIAN TO THE NEWPORT HOSPITAL, NEWPORT, R. I.

In these days of many medicaments, and their innumerable applications to diseased conditions of the human organism, new remedies being constantly added to the list, and, for a time, at least, partially displacing the older ones, physicians are prone to

[1] Read before the Newport Medical Society.

be too easily led to disregard or depreciate the value of many remedies, good in themselves, but which, from defective preparation, the addition of inert and worse than useless compounds, or too brief a trial, may be found to be of little or no service to the patients for whom they are dispensed. Perhaps no substance used in medicine has been subjected to greater abuses, and, in consequence, has been brought into greater disrepute, than cod-liver oil. For this there are several reasons. Much of the so-called cod-liver oil is not cod-liver oil at all; more of it has been too carelessly and recklessly "tried out," and the livers of other fishes are frequently used to compensate for a deficient supply of the cod livers; added to which may be mentioned imperfect methods of refining, rendering it impossible to eliminate from the oil its organic impurities. To these fraudulent and pernicious practices it is largely due that cod-liver oil has not maintained, so well as it should, the high place in the category of therapeutic agents for which it was manifestly destined. On the other hand, with the exception of iron, mercury, and potassium, there is no remedy that will exert a more beneficent influence over so wide a range of diseases. In all lung affections that threaten disintegration and decay, cod-liver oil is confessedly the most valuable remedy at our command, when used in the incipient stages of the disease; and yet, as all know, it is too often powerless when the malady has passed beyond a certain point. Its value in scrofulous diseases, rickets, convalescence from wasting fevers, dentition, and whenever a general alterative and tonic effect is desired, is everywhere conceded; but I propose merely a brief study of the best method of its introduction into the economy, with a view to obtaining the best results.

It is reasonable to assume that almost all maladies for the cure of which cod-liver oil is indicated, are attended, if not pretty frequently sustained, by malassimilation, and those functional disturbances of the stomach and small intestine, so obstinate and difficult to allay, and which so often present a decided barrier to its administration. There can be no doubt, therefore, that the pancreas, whose secretion plays so important a part in the digestion of fatty substances, must, in common with the other organs of digestion and absorption, be weakened, and its function to some extent impaired; so that it would seem in very many (if not all) instances unwise to give cod-liver oil pure and in its crude form, when, from the very nature of things, it cannot be properly emulsified in the duodenum, even when not entirely rejected by the stomach. Happily, we have a means of overcoming this obstacle to its administration, and are enabled so to act upon the oil by trituration with solutions of gum, and in various other ways, as to break up its globules into microscopical granules, suspended in water by the gum; in other words, to form outside the body a "chyle" which may be readily assimilated within. Of all methods used for emulsifying cod-liver oil, I am convinced that the process of trituration with gum acacia is the best, and more nearly approaches the results reached by the pancreatic juice during digestion; for cod-liver oil should be absorbed as such, in its entirety, if possible, the better to economize and secure its virtues. There seems to be no doubt that it possesses certain specific qualities peculiar to itself, which are not known to exist in any other fish oil, and its adulteration by other oils, and their frequent wholesale substitution for it, while claiming its name, are evils for which the physician should be on the alert, nor too hastily conclude that cod-liver oil is inefficient in certain cases, when, perhaps, he may not be using that remedy, but unwittingly may expect its best effects from some oil of inferior quality.

It has become the custom of nearly all of the manufacturers of cod-liver oil emulsions which have become popular, and have obtained (and to some degree have merited) the confidence of the profession, to incorporate with their productions more or less of the phosphatic salts or the hypophosphites, believing them to be of material benefit when thus administered to the patients, and an auxiliary force of the greatest value to the cod-liver oil itself. It has not, however, been very clearly demonstrated that these salts act otherwise than as feeble tonics, and, certainly, it cannot be said of them that they fulfil the end for which they are prescribed, to wit, the reproduction in the system of the phosphoric element, the partial loss of which is supposed to be inevitable in strumous and tubercular diseases, and whatever condition may constitute or accompany the "phosphatic diathesis."

But while the phosphates and hypophosphites do not seem to merit the prominence accorded them as adjuncts to the cod-liver oil treatment, I believe that the muriatic salts, properly combined with the oil, lend to its action far more of specific value than any others yet used in conjunction with it. Niemeyer says: "The internal use of the alkaline muriate mineral waters, which is so often beneficial in simple catarrh, is equally useful in some cases of consumption" (*A Text-book of Pract. Med.*, vol. i. p. 243). The chlorides of ammonium and sodium have long been recognized as agents of some power in tubercular and other lung and scrofulous affections, acting equally upon the organs of nutrition and respiration, and I have found that after using a preparation of cod-liver oil, combining these salts, the happiest results have followed.

My attention was first directed to this, in some sense, new departure in the administration of cod-liver oil compounds by Mr. A. K Quinn, of this city, who prepares his own oil from fresh livers, and, having thoroughly purified it, emulsifies it with gum acacia each ounce of the preparation representing sixty-six per cent. of pure cod-liver oil and sixteen grs. of the muriates of ammonium and sodium. This should be taken in the ordinary doses in sweetened water or milk, dissolving readily in either, and it has been in almost all instances well borne by the stomach, with no disagreeable eructations.

I have prescribed it very frequently during the past year in a great variety of adynamic conditions, chiefly of the tubercular and strumous orders, and am justified in asserting that many times it has been

of marked and rapid service in arresting organic changes, and repairing weakened tissues, where other compounds had failed to manifest any curative power whatever.

As may be noted, there is no attempt at secrecy or privacy regarding the constituents of this remedy or its method of preparation, but, for convenience in prescribing, the originator has styled his production "Morrholeine," from *morrhua*, the cod, and attaches particular stress and import to the necessity of having a pure and thoroughly refined cod-liver oil used in its compounding, he having found by repeated experiments that without such an oil, a stable and palatable product cannot be secured.

I will briefly relate the medical histories of a few cases in which I have tested the virtues of the muriatic salts with cod-liver oil, selecting these from a number of which I have notes, as affording the most striking evidence of the good results obtained by their use.

Case I.—D. S., æt. 29; native of Rhode Island; late horse-car conductor of New York. Had been for nearly a year suffering from lung trouble, as shown by pain in chest, cough, free expectoration, emaciation, etc. Grew worse, and was taken to Charity Hospital, and after spending some time there, his friends were sent for to take him home to die. When brought here, he was unable to walk from the boat to a carriage, a short distance.

I saw him on the next day, and found him with signs of what I would call chronic interstitial pneumonia; there were dulness at both apices, prolonged expiration, and bronchitic râles. After allaying a distressing irritability of the stomach with the usual remedies, I prescribed morrholeine, which he continued faithfully. He came here in the early part of May, and was driving a hack on July 4th.

Case II.—M. M, mason's tender, aged 30; left Boston in April weighing two hundred pounds; came here to work, and thought that while coming down on the train and boat he aggravated a severe cold, which had troubled him, from time to time, for some months.

He worked here one week, growing worse all the time, and was then seized while at work with a pretty severe hemorrhage, which frightened him. He remained at his boarding-house two weeks longer, suffering from night-sweats, loss of appetite, a constant, sharp, and racking cough, and lost thirty pounds in weight. When I saw him, three weeks after his arrival, he presented a very bad appearance. His respirations were short and quick, his pulse rapid, and there were râles over both apices. I prescribed for him morrholeine and zinc and belladonna for his night-sweats, and in less than one month from the date of the prescription he was at work.

In neither of these above-mentioned cases was there any hereditary tendency to phthisis.

Case III.—J. R., clergyman, æt. 32; had had for several months a short, dry cough, night-sweats, a gradual tendency to dyspnœa on exertion, and was being treated for nervous prostration with the *comp. syr. of the hypophosphites*. In the latter part of August, his symptoms culminated in a severe hemorrhage, the quantity of blood expelled being nearly two quarts. On examination, the right apex was found indurated, with a harsh respiratory murmur for some inches downwards. I kept him in bed for three weeks, during which time he gradually improved in every way, his chief treatment consisting of the chlorides with cod-liver oil.

He has continued it faithfully since, and is now practically well. In this case there was a distinct heredity, proved by the fact of his father having died of phthisis.

Now, if the *hypophosphites* possess the power over lung-disease with which so many accredit them, surely here was an opportunity for them to exercise it, as my patient had taken them regularly and persistently for months, and they did not in any degree benefit him apparently, and certainly did not prevent him from passing almost beyond the possibility of recovery.

I could cite several other cases, but do not wish to occupy too much time, my desire being merely to direct attention to the good results which have attended the use of the chlorides of ammonium and sodium with cod-liver oil in my hands, and I hope that many others will be equally fortunate, and establish beyond doubt the therapeutic value of the combination.

CASES OF KNEE-JOINT EXCISION, WITH REMARKS.[1]

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Mr. President: In my paper to-night I am able merely to present the histories of all my cases of knee-joint excision as a contribution to the statistics of that operation, with especial reference to the danger and mortality arising from this operation.

Case I.—Frank Halle, aged twelve. Parents gave a history of synovitis complicated by abscess, occurring at the age of two. Both knees were affected. When the patient came under my observation at the Orthopædic Hospital, the right leg was flexed so as to form an angle of twenty-five degrees with the thigh. No extension was possible. The left leg was flexed as much, but could be extended so as to form an angle of ninety degrees with the thigh. The boy moved by sliding about on his toes, the heels touching the buttocks. Both knee-joints were surrounded with cicatrices of old sinuses.

On June 10, 1878, I attempted to excise the right knee joint, as the head of the tibia was displaced very far backwards, and forced extension aided by tenotomy had been attempted on the left leg without success. Owing to the great displacement of the leg backwards, and the shortening of the hamstring muscles and posterior ligaments, I was obliged to remove no less than four inches of bone, so that the femur was sawn after several sections had been made, far above the epiphyseal line. The operation was done under the constant use of the carbolic acid spray, and a complete Lister dressing

[1] Read before the New York Surgical Society, March 25, 1884.

was applied. A plaster-of-Paris bandage was applied to the thigh and to the leg, the plaster appliances being connected by hoops of iron curved over the joint outside of the dressing. Horse-hair drainage was used. This case required a great deal of nursing. Numerous sinuses formed, one abscess had to be opened in the popliteal space, and necrosis of a portion of the lower end of the femur occurred. Bony union was not firm until May 6, 1883, nearly ten months after operation. By June 2d, patient was able to walk with a support on the left side, such as a chair or crutch. It was my intention to operate upon the other knee, but permission to do so was refused by the parents.

CASE II.—Kate Lyons, aged twenty-nine. This patient came under my observation in December, 1882, at Bellevue Hospital. Ten months before this time, she had had an attack of acute articular rheumatism, which especially affected the right knee-joint. I found the leg flexed at a right angle with the thigh, rotated outwards, displaced outwards and backwards, and firmly ankylosed. The patient was quite helpless from the deformity, was weak and anæmic, and her urine contained granular casts. I excised the joint on January 4, 1883. The patella was firmly adherent to the femur, and was removed. To allow proper extension of the leg it was necessary to make a second section of the femur. The bones were drilled at two points and silver wires inserted, which were brought out between the flaps. Full Lister precautions were used throughout the operation, and a Lister dressing applied. Rubber drainage-tubes were used. A plaster splint was applied to the thigh and another to the leg, and these were connected by iron brackets passing over the knee. Seventeen days after the operation I found it necessary to continue the leg splint down to the toes in order to prevent eversion. The limb confined by the plaster apparatus was kept upon an inclined plane, this position aiding in steadying the femur, and also allowing the under portions of the dressing to be easily inspected. The average temperature during the seventeen days following the operation was 100.2°. On one occasion, seven days after the operation, symptoms of carbolic acid poisoning appeared, and the temperature suddenly rose to 105.2°. A bichloride dressing was applied, and the temperature at once fell to 101.2°. On no occasion was there the slightest reason for anxiety about the case, except when the symptoms of carbolic acid poisoning were present. A collection of pus formed in the upper synovial pouch, and the silver wires also caused suppuration along their track. The patient was discharged able to walk well on April 28th, a little less than four months after the operation. The shortening in this case is 1.75 inches.

CASE III.—Charles McKenzie, aged fifteen, a healthy, well-developed boy, suffering from atrophy and deformity of the left lower extremity and left half of the pelvis, due to infantile paralysis, came under my care, at St. Luke's Hospital, on February 1, 1883. The thigh was partially flexed upon the body, the leg flexed at a right angle to the thigh, rotated outwards, and displaced backwards. No ankylosis existed, but the greatest extension possible was 112°. The muscles of the thigh, leg, and foot were completely helpless, and the whole limb looked like that of a boy ten years of age. The shortening, as ascertained by careful measurements, was estimated to be five inches. This patient was able to move about with difficulty on crutches.

I excised the knee-joint on February 17, 1883. The tibia and femur were wired together with silver wire. Two rubber drainage-tubes were used, one on the inner, and the other on the outer, side of wound, and the wound was washed with carbolic acid and water, 1 to 40, and covered with gauze wet with the same solution. Dry gauze and borated cotton were bound over this dressing. A plaster splint, such as is here shown, was then applied, a single curved iron bracket passing over the knee, and a single nearly straight one passing behind. The limb was then kept upon an inclined plane.

This patient's temperature rose on the next day to 104°, on the second day sank to 103°, and by the sixth day stood at 99.6°. From this time on, there was never any temperature above 100.6°, and that temperature was reached only once.

In this case, also, pus formed in the upper synovial pouch and along the track of the wires.

Firm bony union was found on April 28th, two months and eleven days after operation.

By May 4th, all sinuses were soundly healed, and with an artificial shoe constructed to make up for the extreme shortening, the patient was walking about with two sticks by July 4th.

At the present date, he is able to walk easily and for long distances with a single cane. I cannot present this patient, as he lives in the northern part of this State. I have a very recent report of his condition from his physician.

CASE IV.—Serreno Cappa, aged twelve. Five months before coming under my care, at St. Luke's Hospital, this boy had received a kick upon the right knee, the injury being rapidly followed by arthritis, abscesses, and caries of the head of the tibia. On examination I found numerous cicatrices about the knee, the soft parts much thickened, great pain on motion, and two open sinuses leading to carious bone in the head of the tibia. The leg was slightly flexed, and motion of four or five degrees could be made when the patient was etherized. I determined to excise the joint, as the only means of saving the leg, and to remove the carious bone at one operation. This I was able to do May 29, 1883. The section of the femur was made just below the epiphyseal junction, and the usual section of the head of the tibia. This last section opened several small abscesses in the head of the tibia, two of which had fistulous tracts leading out through the skin. These I scraped out from the sawn surface, thus making grooves on the upper end of the tibia, in which drainage-tubes of rubber could lie without separating the femur and tibia. Three tubes were inserted and brought out in the line of union of the skin. Drainage-tubes were also inserted at each lower angle of the incision, to drain the superficial wound. The patella was removed and silver wires were used to assist apposition, and a plaster-of-Paris

splint was applied similar to the one here shown, with a single bowed bracket in front, and a nearly straight one behind. A peat dressing was applied. The first dressing was changed on the fifth day, and after that frequent dressings were made; and, thorough irrigations with a 1 to 40 solution of carbolic acid, with the exception of the evenings of the third and fourth days, when it reached 100.6°, the temperature did not rise above 100° up to July 10th, six weeks after operation. The uncovered soft parts then became swollen. I took out the wires and removed the plaster splint, substituting for it a posterior wooden one. Three days later there was a sudden rise of temperature to 104°, and erysipelatous redness appeared on the leg. This attack rapidly subsided, for two days later the temperature was 99°, and did not again rise.

By September 15th, three months and a half after operation, all sinuses had closed, firm bony union had taken place, and patient was able to use the leg freely. The shortening in this case is one inch and a half.

Case V.—Agnes Watkins, aged six. Patient came under my notice at St. Luke's Hospital, May 23, 1883, being transferred from the Orthopædic Department. Had been treated conservatively at the Orthopædic Dispensary and at St. Luke's for some three years without success. Numerous abscesses had formed and opened, and there were extensive ostitis and caries of the lower end of the femur on the right side. The leg was flexed and displaced backwards.

May 25th I excised the right knee-joint, the section of the femur being made well below the epiphyseal line, and the whole articular surface of the tibia being removed. The patella was not adherent and was excised. Two wire sutures were used, the twisted ends being brought out in the line of the wound. A drainage-tube of rubber was inserted at each lower angle of the wound. A plaster apparatus including the foot, similar to that shown, was used, excepting that as the limb was so light and small, no anterior bracket was required. Peat dressing was applied. The dressing was changed every few days, and a 1 to 40 solution of carbolic acid used as a wash through drainage-tubes. Six weeks and a half after the operation the wires were removed, and perfect union of the bones found. Two months after operation the patient was up and walking about.

The temperature in this case reached 100.2° on the evening of the sixth day. On no other occasion did the temperature go above 100° until the wires were removed; it then went up to 102°, but at the end of two days was again normal. Present shortening less than three-fourths of an inch.

Case VI.—Matthew Carey, aged seven, came under my care at Bellevue Hospital, in July, 1883, giving a history of synovitis of the right knee-joint originating in a traumatism received eighteen months ago. I found the knee flexed on the thigh at an angle of forty-five degrees, rotated outwards, and the head of the tibia markedly displaced backwards. I divided the hamstring tendons and attempted to straighten the limb, but, as so often happens in such cases, the shortened posterior ligaments could not be made to yield, and the head of the tibia was still more displaced. The attempt at straightening was also followed by a partial paralysis of the muscles of the front of the leg.

October 18, 1883, I excised the joint, finding almost complete destruction of cartilage without ankylosis. This operation was done with constant irrigation by a bichloride of mercury solution, 1 to 1000. Silver wire used and ends brought out. A deep continuous suture of catgut was used in sewing up the capsule, and a similar one for the superficial wound. A rubber drainage-tube was inserted at each angle of the wound, and, to provide against the accumulation of fluid in the upper synovial pouch, a short tube was passed through the skin into the upper end of this sac. The wound was dressed with iodoform, carbolized gauze, and cotton, and was put up on a posterior wire splint.

The first dressing was removed thirteen days after operation, and tubes removed. The wound had entirely healed except at points of entrance of tubes. During November and December a dermatitis without constitutional disturbance, set in. This was probably due to the irritating effects of the carbolized gauze.

The highest temperature reached in this case was 101°, on the evening of the day after the operation, and again once on the third day. The average temperature was very nearly 99.5°. The position is good, and the boy can walk; but to-day, five months after operation, bony union is not quite perfect.

Case VII.—George Betz, aged seven, a very strumous boy, whose right knee had been previously opened by one of my colleagues at Bellevue Hospital for the relief of an obstinate synovitis, with caries of the patella, and fungous disease of the joint. The patella had been removed, and the joint carefully scraped out. The operation had apparently been entirely successful for a time, but, under my observation, pus formed in the joint, found its exit through the anterior part of the upper synovial pouch, and the probe readily detected caries of the lower end of the femur.

January 31, I excised the joint, finding extensive disease of the lower end of the femur. The operation was done under the constant irrigation with 1 to 1000 bichloride solution. Catgut was employed for ligatures and sutures; the wound was dressed with iodoform, carbolized gauze, and cotton; bone drains were used; and a *complete* plaster splint applied *over all*. This dressing was not removed till six weeks after the operation. Pus was found in considerable quantity beneath the dressing. A line of prominent granulations existed throughout most of the wound. Bony union was almost complete.

The highest temperature reached in this case was 100.4°, on the twentieth day after the operation; the average temperature throughout was below 100°. I think it was a mistake to attempt to leave this first dressing on so long. Slight overextension, which might have been rectified at at earlier date, now exists.

Case VIII.—Mary Finkbeiner, aged twenty-six.

When eight years old, this patient received an injury to her right knee, which was followed by a synovitis of ten weeks' duration. She has been able to walk, with a limping gait, up to six months ago, when renewed disease of the joint forced her to use crutches. When the patient came under my care, at St. Luke's Hospital, in February of this year, I found a large abscess in the head of the tibia, opening externally about two inches below the joint, and above, through a large opening in the articular cartilage, communicating freely with the joint. Bony crepitus on motion was marked, the joint much swollen, and the leg partially flexed. General condition of patient very bad.

March 7, I excised the joint, the section of the tibia opening a large abscess already referred to, and the first introduction of the drill on the inner side opening another. Both of these abscesses were thoroughly scraped, and openings for drainage-tubes made into them through the anterior surface of the tibia, *about two inches below the joint.* Rubber drainage-tubes were introduced through these openings. The operation was done with constant irrigation of bichloride solution, a deep and superficial continuous suture being used in the wound. A short bone drain was inserted at either angle of the wound. It was impossible to use wire or other means to hold the bones together, as the abscesses referred to had so weakened the head of the tibia. The wound was dressed with iodoform and gauze, and the limb bandaged to a posterior wooden splint, with foot-piece, to prevent rotation of the leg. This dressing was untouched until yesterday, twenty-two days after the operation, when I found the wound soundly healed, without pus. I removed the wooden splint, and put up the limb in the bracket splint shown. This case, like the preceding two, is not finished, and is only presented as bearing upon the question of immediate danger from the operation. The temperature record of this case is unusually good for a patient twenty-six years old. On the evening of the day after operation, the temperature reached 100.4°. With that exception, the temperature has never risen above 99.4°. It is noticeable, too, that, although no wires were used in this case, it was very evident at yesterday's examination that the bones were in close apposition.

The method of operating was nearly the same in all cases, a slightly curved incision being made from the back part of one condyle across the front of the joint below the patella, to the back part of the other condyle. The patella was removed in all the cases, even when not diseased, and also as much synovial membrane and diseased capsular tissue as possible. In only the first case was any attempt made to use a drain passing from one side of the joint to the other. Two silver wires were used to suture the bones in every case except the last. The apparatus used has varied, but in five cases I have used the plaster splint with brackets similar to the one shown. This apparatus can be readily made and applied by the operator immediately after the operation, and allows of moving and dressing the limb very readily. I think that the best method is the one I adopted in the last case, that of putting the limb immediately after operation in a permanent dressing, and fastening it to a posterior wooden splint with foot-piece; this provides against the chance of having to remove the plaster apparatus soon after the operation in case of swelling of the parts, or on account of accidental soiling of the plaster. At the end of two or three weeks the plaster splint with bracket can then be applied, and any desirable change in the position of the leg made.

I have never tried the incision recommended by Hahn, of Berlin, which passes across the joint *above* the patella. It would doubtless allow of a more ready removal of the upper synovial pouch. Such a removal is, I think, of considerable importance, as in most cases which I have seen there has been a tendency to the accumulation of fluid at that point.

With regard to suturing the bones with wire, or nailing them together, as Hahn did in so many of his cases, I am inclined to think that neither procedure has very great value. In an ordinary resection of the knee the posterior ligament is uninjured, and forms a thorough posterior support, and the natural shortening of the hamstring muscles must draw the tibia upwards. Rotation seems to be the movement most to be feared, and that can be avoided by the retaining apparatus.

PERIPHERAL PARAPLEGIA.

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IT is with some hesitation I adopt the caption "Peripheral Paraplegia" to designate a class of cases in which a correct diagnosis is by no means an easy matter. We meet with a patient who gives us a history of good health up to the present attack, who states that his illness began somewhat suddenly, that it could not be traced to any injury, and yet he is more or less completely paralyzed in both legs, or in both hands and arms, or in all these members.

On going more fully into the details of the case, we gather that the patient has been working at some exposed employment, in which he has had repeated wettings and chills; or that he has been called to stand upon cold, damp ground, with a current of air passing around his feet and legs; or that he has been engaged in draining during the cold season of the year. From such occupations, so far as I can ascertain, comes the disorder on which I purpose making a few remarks, recording same cases, and asking the profession to express an opinion.

The trouble usually begins with a feeling of general fatigue; the patient complains of a want of energy for his accustomed work; the limbs feel strange, and yet it is hard for the patient to say what they really feel like. There is some loss of control over them; this loss of power may be but slight, or it may suddenly become quite alarming. There is a tingling in the affected parts; but the sense of touch may remain only slightly or not at all impaired for a time. The tingling becomes more and more annoying, the weakness of the limbs gradu-

ally increases, until the patient is not able, or scarcely able, to walk. From this stage, things may begin to mend, and, after a protracted illness compared with the severity of the symptoms, there is a restoration to complete health.

In other cases, however, the symptoms grow worse than those depicted above, and the patient takes to the bed. The legs, as just stated, have suffered first, but the disease does not stop there. By and by, functional derangements set in. There is more or less difficulty in passing urine, the bowels are constipated, the patient loses weight considerably, and the flesh is soft. In severe cases, in which the illness is marked in its symptoms, and protracted in duration, the girdle-pains of paraplegia are at times quite pronounced.

Looking at the nervous condition of the patient more closely, it will be seen that the paralysis, or, rather—for a time—paresis, was slight. On close inquiry, it is found that the state of the sensory nerves first drew the attention of the patient. The strange feeling of the limbs was first noted. This feeling is subjective rather than objective. The patient realizes that the sensation is disturbed, even although the tactile power remains fairly good. In succession to this state of sensory derangement come the motor aberrations. Steadily the paretic condition creeps on, until the power of the limbs is wholly, or almost wholly, gone. So far there is no evidence of anything being wrong with the spinal cord; but this does not always remain so, and after a time there are signs which lead us to believe that it is also affected. Of the symptoms here, I have mentioned a few, such as the girdle-pains, constipation, and difficulty in voiding urine.

Where is the lesion situated which causes this form of paralytic trouble? Three places suggest themselves: the brain, the spinal cord, or the peripheral nerves. With regard to the brain, we must note that a paralysis occurring from any lesion in this organ is generally unilateral. To this statement the only exceptions of any moment are: 1. General paralysis of the insane; and, 2. When the injury, or disease, involves that part of the brain where the fibres cross. Now, the disease in question is bilateral, and, therefore, cannot depend upon any lesion affecting only one side of the cerebrum. The history of the case clearly excludes general paralysis of the insane, or disease in which the cerebral fibres decussate.

Turning to the spinal cord as a possible place for the cause of the disturbance, several points come up for examination: 1. The disease is bilateral—just as it might be if due to injury or disease of the cord. 2. There is either loss or impairment of the functions of both motor and sensory nerves; as we would find from a spinal cause. 3. There is the girdle-pain. 4. The organic functions of life suffer—similarly to cases in which the origin of the disease is undoubtedly spinal in its nature.

With regard to the peripheral nerves, we see: 1. That the diseased action begins at a distal part of the body, as the foot and leg. From this, as a starting-point, it gradually advances until parts more centrally situated are implicated. 2. That the girdle-pain appears late in the progress of the case; and if the patient be fortunate enough to make a speedy recovery from the earlier stages of the paralysis, this symptom may be slight, or not at all marked. 3. That the loss of power over the bladder and bowels is also a late feature of the case, and appears to come on quietly and insidiously, as the case is advancing from a lighter to a severer type. 4. That the abnormal condition begins to show itself first in the sensory nerves, which never escape. The opposite of this is the case with regard to paraplegia from the spinal cord. The motor are more likely to suffer first than the sensory, and, indeed, the latter may not become affected at all.

From this description, I have no hesitation in regarding these cases as of peripheral, and not central, origin. The lesion commences in the distal ends of the nerves, and thence advances along the nerves towards the centre of the body, involving larger and larger trunks as it advances. Finally the cord is reached, and once this has taken place, there is no further difficulty in understanding the girdle-pain, or the loss of action in the bladder and bowels.

Case I.—William G., æt. 55; healthy. There was no history of syphilis in this case. Previous to the attack he had been a watchman, and was exposed a great deal to cold and wet. The attack began in the late fall weather. He complained of tingling in his feet. Soon after this, his hands were similarly affected. He began gradually to lose power over his legs. In about three weeks from the commencement of his attack he could not walk. Although a strong man, he had almost entirely lost grasp in his hands. He steadily grew worse. In the seventh week of his illness, the bowels and bladder became irregular and sluggish. The catheter had to be used. At the end of the eighth week he suffered a good deal from the girdle-constriction around the body. Things remained in this condition for upwards of five months, when a slow improvement took place. By the end of the summer following he had largely regained his health, although he has never been up to his former degree of vigor, and there is a very slight amount of paresis still remaining.

Case II.—James L., æt. 48; yardman. This patient was greatly exposed—frequently very warm, and then chilled. Had a severe chill a week before I saw him. When he came first under my notice, he was complaining of constant tingling in his feet and hands. Sense of touch still good. He had some difficulty in walking, as his knees would go out from under him. By the end of the second week the sense of touch was greatly impaired, though it was never lost entirely. When sitting on a chair, he could make no effort to raise the thigh with my hand placed upon his knee to exert a downward pressure. The patellar tendon-reflex was completely absent on both sides. In ten days more he could not walk at all. On the thirty-first day from my first visit, he was seized with severe girdle-pain, which caused much suffering for the next month, when all the symptoms began to abate, and he made a good recovery. No trouble with the bladder, but the bowels became torpid.

Cases III., IV., and V. present so many features similar to the above that I forego giving any detailed history. In Case IV., that of a Presbyterian clergyman, I might mention that he had been exercising himself with clubs, and felt warm. He directly drove a distance of about ten miles. The day was cold. To this he dates back his illness. He suffered greatly from shooting pains in the back and legs.

These five cases have fallen under my own observation. Three other similar ones I saw in the clinic of Prof. Grainger Stewart, of Edinburgh, and it was with no small degree of interest that I heard that learned scholar comment on their probable nature. Whatever might be their cause, one thing seemed clear to his mind—that they were of peripheral origin. Since then, the cases I now record have fallen under my notice, and the more I think over the matter, the more firmly do I become convinced of the truth of the above opinion.

Now, what is the pathology of such cases? I have not had the opportunity of making a post-mortem in any such case, as those I have seen recovered. On this account, it is impossible for me to express a positive opinion. Still, judging from the causes, such as cold and exposure, that we find preceding the disease, and looking carefully at the clinical history presented by persons so attacked, there is a good deal to support the view that there is a general neuritis of the peripheral nerves. This is not all conjecture, however. A careful research of the literature bearing in any way upon this question, reveals the fact that patients having the symptoms of this form of paralysis, and dying of some other cause, did, on examination, yield evidence of inflammation of the nerves.

The prognosis, so far as can be ascertained, is good.

The treatment which I have adopted consisted in good sustaining measures. Of the two classes of drugs, the arterial contractors and the arterial dilators, I have obtained the best results from the latter; and of these, none has acted as well as aconite. Shampooing of the limbs and surface of the body is also useful, and should be followed by an efficient friction with a good, thick bath-towel, until the skin begins to feel tender. Stimulating agents, as mustard, may be put in the water, or light sinapisms to the surface, changing their place of application.

THE RADICAL CURE OF ARTIFICIAL ANUS.

By WILLIAM A. BYRD, M.D.,
OF QUINCY, ILLINOIS.

In The Medical News for February 2, 1884, there is an editorial article with the above heading, in which is discussed the relative value of the old and classic operation introduced by Dupuytren, and variously modified since his day so as to meet the requirements of different surgeons, and the excision of the affected portion of the bowel and the stitching together of the upper and lower ends, as first practised by our accomplished countryman, Dr. R. A. Kinloch, of Charleston, S. C. The writer concludes, from results of reported cases of enterectomy, with suturing of the divided ends of the bowel, that it will not bear the crucial test of time and experience, and that the far less dangerous operation of Dupuytren will be the operation of the future surgeon. But these are the words: "Hence we think that the procedure should be reserved, first, for the more simple cases in which compression, cauterization, and the enterotome and autoplasty have failed; secondly, for cases of great destruction of the intestinal wall with extensive prolapse of the mucous membrane, and with or without invagination of the upper portion of the gut; and, thirdly, for the cases in which the ends of the intestine are so disposed that, even after the destruction of the éperon, there could be no reëstablishment of the natural course of the feces, as would happen if the lower end of the gut were placed above the upper end, if the two segments crossed each other at a right angle, or if there were a notable difference in the calibre of the two ends of the intestine."

I wish to call the attention of the reader to a plan that I believe will be found as safe as that of Dupuytren, and as effective in joining the ends of the bowel by suture, when that method proves a success. The method that I propose is to free the bowel from all attachments at the site of the artificial anus; then remove a section from each end of the bowel, opposite the attachment of the omentum, obliquely from the omental border, so that the opening into the bowel will be elliptical in shape, and the long diameter of the opening twice as great as the transverse diameter. Then the edges of the bowel should be brought together carefully with the peritoneal coats in apposition, the ends coming together in a V-shape, leaving a small portion ununited at or near the omenal border. The portion of bowel with the opening in it should then be attached to the opening in the abdominal walls, so that all gases that form would have a free escape. This procedure would free the operation from the danger of over-distention, which—if the operation is done quickly, and with proper precautions as regards cleanliness—is the chief factor in the production of a fatal issue. This diminutive opening would likely heal up without further interference.

I have operated for the closure of artificial anus three times, but have never adopted the method here suggested, as no case has presented since the matter suggested itself to my mind. I feel sure the method can be successfully carried out by most of our surgeons, and I hope that some one will shortly demonstrate its feasibility.

I have in six cases excised a portion of the bowel and sutured the divided ends into the opening in the abdominal wall, making an artificial anus, for intestinal obstruction, and none of the patients have died under the second month after the operation, and none from the effects of the operation, and three are living and are in perfect health now; one operated upon October 9, 1878, another January 21, 1882, the other one in September, 1882. The difference in the calibre of the upper and lower ends of the bowel need not be an objection to the performance of the operation, as that portion having

the larger calibre can be closed with sutures so as to allow of the smaller portion fitting it, or the smaller piece can be cut off diagonally enough to fit the larger opening. Of course if the bowel crosses at the point near where the artificial anus is, so as to have the lower piece present from above and the upper from below, enough of the canal will have to be excised to correct the trouble. In one case I sutured the ends of the bowel together parallel to each other, so as to insure not catching tissue that I did not want in my enterotome when the operation for the radical cure was performed. If the operation should fail on account of non-closure of the opening, then the plastic operation may be performed, with an almost assured success, that I first described in the *Medical and Surgical Reporter* for October 25, 1879, and also in the Address in Surgery, delivered by me when Chairman of the Surgical Section, before the American Medical Association, at its session in St. Paul, in 1882.

I wish to emphasize the benefits to be derived from leaving an opening for the escape of the gases that almost always form and complicate recovery from nearly all operations upon the abdominal viscera. I called attention to it in a paper entitled, "Abdominal Section in the Treatment of Ulceration and Perforation of the Cæcum and the Appendix Vermiformis," read before the Surgical Section of the American Medical Association, in Richmond, in 1881, when I used these words: "Another thing that I wish to call your attention particularly to is the benefits derived from having an artificial anus formed. This is not a fictitious advantage, as it allows the gases that form in the bowels to escape without distending them, and, perhaps, causing small cracks in the peritoneal coat, inducing peritonitis or paralysis from over-distention."

416 Jersey Street, February 18, 1884.

MEDICAL PROGRESS.

Removal of Malignant Tumor of the Bladder.—Prof. F. Guyon reports the case of a man, æt. 58 years, who had abundant and persistent hæmaturia; on examination a diagnosis of vesical tumor was made. In spite of absolute rest and various methods of treatment, the patient continued to lose blood, and Guyon decided to explore the bladder. Having opened the viscus, by the hypogastric operation, he found a tumor springing from the right wall and supported by a pedicle an inch and a half or two inches long. It was easily removed by the serre-nœud, and the point of attachment was scraped with the nails and the curette. There was very little hemorrhage. Two drainage-tubes were put in, and a Lister dressing applied. The patient began to improve immediately, the urine remaining bloodless from the time of the operation, and in about twenty days the wound was completely cicatrized. The cases reported by Billroth, Volkmann, Kocher, Humphrey, Thompson, Bazy, and Guyon (who has performed the operation in other cases), show that the operation is both justifiable and demanded under these circumstances.

Guyon is in favor of the hypogastric operation, in exploring for tumors, because: 1. It has been clearly shown that the suprapubic operation is relatively easy, and much less dangerous than the perineal. 2. It gives much more room than the perineal section, because it enables the operator freely to explore the viscus and see what he is doing.—*Ann. des Mal. Génito-Urin.*, March, 1884.

The Treatment of Suppurating Buboes by Compresses.—O. Petersen, in an article on this subject, says that so soon as fluctuation is detected the buboes should be widely incised and emptied, and syringed with carbolic or corrosive sublimate, solution; after the bleeding has ceased iodoform should be dusted on. The wound is then filled with salicylic wadding, a pad of this or of tow placed over it, this covered by oiled paper, and the whole fastened by a spica bandage. Unless the discharge is profuse, this dressing may remain untouched for eight or ten days. The average time of healing by this method in one hundred and fourteen cases was only twenty-three and three-tenths days, while the time required in twelve cases without this dressing, was fifty-three and eight-tenths days.—*Centralbl. f. d. klin. Med.*, February 23, 1884.

A New Transfusion Apparatus.—At a recent meeting of the Académie de Médicine, M. Dieulafoy exhibited a new transfusion apparatus made by Collin. The injection of the smallest quantity of air into a vein is avoided, as whatever air may find its way into the apparatus immediately accumulates in a receptacle at the top. There are no valves in the instrument, small balls of hard rubber being used instead. Two cuts, illustrating the mechanism of the instrument, may be found in the *Revue de Thérap.*, January 30, 1884.

Iodoform in Cancer of the Cervix Uteri.—Dr. Castré particularly recommends (*Thèse de Paris*, July, 1883) the following formula, first advised by M. Gillette:

℞.—Iodoform,	ʒivss.
Sulphate of quinine,	℈ij.
Powdered charcoal,	ʒiv.
Essence of peppermint,	gtt. lx.—M.

Thus prepared, iodoform may be added to other mixtures which it may be desirable to use. In cancer of the cervix, Castre recommends this preparation in powder, applied, on a cotton tampon, directly to the ulcerated surface. The ulcer should not be scraped or interfered with in any way before applying the tampon. This application may be made every two, four, or even ten days.—*Bull. Gén. de Thérap.*, February 29, 1884.

Transfusion in Bright's Disease and Diabetes.—M. Dieulafoy recently reported to the Société des Hôpitaux, the case of a man æt. 54 years, who had had abundant and repeated epistaxis, into whom about ƒʒiv of blood were transfused, with the happiest results. The new blood acting by its quality and not by its quantity, modified the blood of the patient and acted as a hæmostatic. This success has given to Dieulafoy the idea of introducing transfusion as a therapeutic measure in certain dyscrasic diseases, particularly Bright's disease, as has already been done twice by Bartels, in uræmia.

In the two cases published by Dieulafoy, there may be noticed a considerable amelioration of the general symptoms, and an enormous diminution of the quantity of albumen. The second case was that of a woman, who passed three grammes of albumen and twenty-four grammes of urea in a day, before the transfusion, and only eighteen centigrammes of albumen and thirteen grammes of urea afterwards. M. Dieulafoy questioned if a complete cure could not be obtained by repeated transfusions if the treatment was commenced early. M. Dujardin-Beaumetz did not believe transfusion capable of effecting good results when there is organic lesion. He did not see how transfusion could repair an altered kidney.—*Ann. des Mal. Genito-Urin.*, March, 1884.

Treatment of Peripheral Neuralgia by Osmic Acid.—Dr. A. Eulenburg, of Berlin, says, in a communication on this subject, that the observations published by Delbastaille on the treatment of certain tumors (sarcoma and scrofulous lymphoma especially) have been confirmed by others. Lately, Neuber has used from ten to twenty-four injections of osmic acid in two cases of sciatica, and in one case of trigeminal neuralgia, with complete success.

When the tendency to recurrence of the neuralgic attacks is considered, the results of this treatment do not seem to be very encouraging. Twelve cases are tabulated, including sciatic, lumbo-sacral, brachial, intercostal, occipital, and trigeminal neuralgia; of these, three, all recent cases, were cured, two being sciatic, and one brachial; in five cases there was no change for the better, and the remaining four were improved, other treatment being substituted in three of these. The number of injections in these cases varied from three to fourteen, extending over from one to six weeks, the injections being made over the seat of greatest pain, in order, if possible, to obtain a direct action by diffusion of the acid to the perineurium. The injections were made of a one per cent. aqueous solution in doses of ♏v. Eulenberg cautions that the solution should be kept in the dark, as otherwise it becomes black; and for this reason it is better to use a freshly prepared solution.—*Berliner klin. Wochens.*, February 18, 1884.

The Administration of Paraldehyde.—As a pure hypnotic, says Prof. Dujardin-Beaumetz, paraldehyde is superior to morphine and chloral. The sleep is more calm, the awakening is easier, and is not accompanied by the headache and other bad symptoms which invariably accompany the use of opium. But paraldehyde is powerless in pain. In insomnia, especially that of morphiomaniacs, it is an excellent drug.

M. Yvon gives various formulæ for its administration; as paraldehyde f℥jss, alcohol (90°) f℥vj, simple syrup f℥jv, tincture of vanilla ♏lxxv. Dose, f℥v to f℥j in sweetened water. It may be given in what Yvon calls the hydro-alcoholic solution—paraldehyde f℥ss, alcohol (90°) f℥j, boiling water f℥j. This is a 1 to 50 solution, the dose of which is f℥ijss to f℥v or more. This may be given in a little sweetened water, or in an aromatic infusion, as tea, mint, etc. The aqueous solution is, paraldehyde f℥j, boiling water f℥jss, the dose of which is about f℥ss. Instead of pure water, any distilled aromatic water may be used; or ♏lx of paraldehyde may be dissolved in f℥ijss of water. Another formula is, paraldehyde ♏xv to f℥j, simple syrup f℥j, water f℥ij, tincture of vanilla gtt. xx. To be taken in one or two doses. The vanilla may be replaced by tincture of canella, or some form of mint or anise. It may be given in elixir, paraldehyde f℥ijss, alcohol (90°) ℥jss, tincture of vanilla f℥ss, water f℥j, simple syrup f℥ij. Dose, about f℥ss, in water.—*Bull. Gén. de Thérap.*, January 30, 1884.

Amputation of the Uterus by the Elastic Ligature for Chronic Inversion.—Prof. A. Mazzuchelli, of Pavia, reports the case of a woman, æt. 35 years, who had inversion of the uterus dating from her seventh labor. After several ineffectual attempts to restore the organ to its proper position, Mazzuchelli decided to remove it by means of the elastic ligature. The uterus was drawn down, the ligature thrown around it by means of the Desault polypus serre-nœud, and was then replaced in the vagina. Thirty hours afterward the organ came away. Antiseptic injections and powders were thrown in, and the patient was soon cured. This is the seventh Italian case, all of which recovered.

The statistics collected by Denucé show that of thirteen cases in which the elastic ligature was used, only one died, while the lowest mortality for any other operation for inversion is from the progressive ligature, 15.87 per cent., and from this to 33.33 per cent. in other operations.—*Annali Univ. di Med. e Chirurg.*, Jan. 1884.

Therapeutic Uses of Lobelia.—In a recent communication to the Société de Thérapeutique Dr. Fournier states that he has successfully used the tincture of lobelia inflata, in doses of ♏xv–xxx, in several cases of cardiac dyspnœa, and in two cases of pulmonary congestion, and with good results in the third stage of phthisis. As lobelia alone is nauseating, it should be combined with polygala. Huchard uses the following formula, which is well borne by the patient:

℞.—Iodide of potassium, . . . ℥ij.
Alcoholic tinct. of lobelia,
Alcoholic tinct. of polygala, . . aa f℥ij.
Extract of opium, . . . gr. iss.
Distilled water, ... ad f℥viij.

Dose—Tablespoonful morning and evening in chronic bronchitis and asthma.

M. C. Paul has used lobelia and iodide of potassium with success in catarrhal asthma, ♏xx of tincture of lobelia to gr. viij of iodide of potassium.—*Revue de Thérap.*, March 1, 1884.

Treatment of Chronic Vaginitis.—Dr. Martineau states that he has found in his service at the Lourcine Hospital that salicylic acid mixed with powdered gum arabic and wheat flour, according to the following formula, gives good results:

℞.—Salicylic acid, ... 3 parts.
Wheat flour, ... 5 "
Powdered gum arabic, . . 1 "

This powder is applied to the whole of the internal surface of the vagina by means of an insufflator.—*Ann. des Mal. Genito-Urin.*, March, 1884.

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RECENT TESTS FOR ALBUMEN.

In a recent discussion on albuminuria by the Glasgow Pathological and Clinical Society (*Glasgow Medical Journal*, March, 1884), Dr. WILLIAM ROBERTS, of Manchester, said of the tests recently suggested that they possess extreme sensitiveness, but that they all have the serious drawback of frequently giving a reaction with normal urine. With urines that contain a large or moderate amount of albumen, the reaction is quite unmistakable; but with such as contain but a small quantity, or only traces of albumen, their reactions require to be controlled by heat and nitric acid before they can be accepted as conclusive. He further found that the old tests—heat and nitric acid—but especially the heat test, when performed with certain precautions, present a delicacy, a certainty of action, and freedom from fallacy which render them distinctly superior to any of the new tests.

Serum albumen and globulin, the two known morbid albumens in the urine, are what we seek to recognize. This being the case, says Dr. Roberts, any test which requires strong acidulation with an organic acid is open to the objection that it precipitates mucin, the essential constituent of mucus, which appears to be present in larger or smaller quantity in all urines. This fact, he says, throws out the tungstate, mercuric iodide, and the ferrocyanide of potassium.

The best test for mucin, according to Dr. Roberts, is concentrated solution of citric acid, which should be used as nitric acid by Heller's method. When a solution of citric acid is thus overlaid with urine, an opalescent zone makes its appearance between the two. Acetic and lactic acids are less suitable, because too light to sink to the bottom of the tube; but acetic acid, if mixed with one-third its bulk of glycerine, acquires a density sufficient for the purpose.

The *heat test* for albumen is performed by Dr. Roberts as follows: Ten cubic centimetres, or three fluidrachms, of urine are placed in a long test-tube, so that it will form a column of two or three inches. To this is added a single drop of acetic acid. The upper half of the column is then heated to brisk boiling. If albumen is present, even in minimal quantity, the upper, boiled portion of the column will show opalescence, in contrast with the lower half, which remains unchanged. If the urine be alkaline, it should be carefully neutralized by adding successive drops of acetic acid until litmus paper shows a faint acidity, and then the final single drop of acid is added before boiling.

Even if the urine possess its natural acidity, and be turbid from lithates—which, of course, should be filtered off or allowed to subside—it is better to add a drop of acid if it is desired to bring out the maximum sensitiveness of the boiling test. By using this small and definite quantity of acid the mucin reaction is avoided, as well as the risk of preventing the precipitation by the use of too much acid. In this manner, Dr. Roberts says, albumen may be detected in a watery solution which contains only one part in 250,000! Surely we need no more delicate test than this.

He does not tell us, however, how to avoid the errors which may arise where comparatively large amounts of albumen are present, but where, in consequence of its previous combination with an acid or alkali, there is formed an acid-albumen or an alkali-albumen, neither of which is precipitable by heat. This error can only be thoroughly guarded against by using nitric acid, according to Heller's method, or, better, Dr. Roberts's own acid-salt solution.

With regard to the nitric acid test, Dr. Roberts says that it is necessary to wait thirty or forty minutes before the utmost delicacy of the test is exhausted, and that the faint hazy zone, which is only fully developed at the end of thirty minutes after the addition of the acid, is just as certain a sign of the presence of albumen as a zone that develops immediately, or after the lapse of one minute.

We confess this method of securing delicacy by the acid test is new to us. We had supposed that to wait beyond a minute or two for the development of the white zone was fatal to the value of the test; for it is at this time that the cloudy belt of acid urates makes its appearance, while anyone who has had much experience with Heller's test knows that when

a small quantity of albumen is present it is soon dissolved by the excess of nitric acid, even where a decided zone appears at the junction of the two fluids.

In fact, while we agree entirely with Dr. Roberts as to the delicacy of the heat test, we consider the nitric acid test far from delicate, although it or the acid-salt solution is still necessary to check the heat test where considerable albumen is present but is not precipitable by heat.

Dr. Roberts also calls attention to a globulin reaction, to which attention has not heretofore been directed. It is based on the fact that this substance, which almost always accompanies serum albumen in urine, is held in solution by sodium chloride and other neutral salts always present. But when such urines are largely diluted with ordinarily pure water, the percentage of neutral salts is so reduced that the globulin falls out of solution and forms a cloudy precipitate. The test is thus applied: Fill a urine-glass or test-tube with water, and let fall into it a succession of drops of albuminous urine. In many cases, each drop, as it sinks, is followed by a milky train, and when a sufficient number of drops have been added, the water assumes throughout an opalescent appearance, as if a few drops of milk had been added to it. The addition of a little acetic acid causes the opalescence to disappear. This reaction, says Dr. Roberts, appears to be due to globulin, or, rather, paraglobulin.

It is certainly an interesting chemical experiment thus to determine the presence of globulin in an albuminous urine, but as it neither adds to nor detracts from the pathological significance of an albuminous urine, the busy practitioner is scarcely likely to make much use of this test at present.

In a very interesting communication to *L'Union Médicale*, No. 34, March 6, 1884, M. CHARLES TANRET, the discoverer of the iodide of mercury and potassium test, replies to the objections which have been made against it in common with several of the recently suggested tests for albumen, on the ground that peptones and certain vegetable alkaloids, especially quinine, are similarly precipitated by it.

In the first place, he gives the correct formula, which he says has been erroneously quoted by Dr. Tyson in his note read before the Philadelphia County Medical Society some weeks ago. It should be as follows: bichloride of mercury, 1.35 grammes; iodide of potassium, 3.32 grammes; acetic acid, 20 cubic centimetres; distilled water enough to make 100 cubic centimetres. The resulting reagent is the double iodide of mercury and potassium, the chloride of potassium being without effect.

This fluid does not require the previous acidulation of the urine to be tested. It is to be noted that the precipitate is resoluble in an excess of albumen, but this source of error is obviated by adding an excess of the reagent. The reagent should be added as long as the cloudiness increases, and when the precipitation of the albumen is complete, its resolution is possible.

As to the precipitation of peptones and alkaloids, M. Tanret says this source of error may be avoided by simply warming the tube, or adding a little alcohol, by both of which measures these substances are redissolved, while a cloud due to albumen is permanent. On recooling the warmed tube the cloudiness, originally produced by peptones and alkaloids, returns.

As to the delicacy of the test, Tanret's original experiments proved that it would show one part of albumen in 2000 of water, but if the test fluid is overlaid by urine, its delicacy is increased tenfold, a beautiful white disk being formed at the intersection of the two liquids.

The advantage of this test over the picric acid, which is at once equally delicate and liable to the same objections, is found in its perfect colorlessness, and the consequent more striking contrast it affords to the urine with which it may be overlaid.

RUPTURE OF THE URINARY BLADDER.

RECOVERY after rupture of the bladder is so infrequent that the case recorded by DR. R. F. WEIR, in the *Medical Record* of March 29, 1884, which illustrates the value of affording a free outlet for the urine already extravasated and that which is subsequently secreted, cannot fail to interest our surgical readers.

A laborer, twenty-eight years of age, who had urinated shortly before, was struck on the pelvis and left hip by a mass of falling earth. A slight ecchymosis of the scrotum and a spot of blood at the meatus led to the passage of a soft catheter, which gave exit to a moderate amount of bloody urine, which became clearer as it flowed. There was no evidence of pelvic fracture, and during the first twenty-four hours the instrument was used three times, and tenderness was experienced in the hypogastrium. On the following day, there was marked suprapubic dulness with tenderness, which extended four inches above the pubes and into each groin, the wall of the belly above the dulness was somewhat rigid; the ecchymosis of the scrotum and perineum was very pronounced; a soft and painful spot was detected by rectal palpation on the left side of the prostate; the urine was passed at times voluntarily, and was not diminished in amount; and the temperature was 99°. Two days subsequently, the pulse and temperature having in the meanwhile risen, and increasing tympanites, tenderness, restlessness, and disposition to vomit having appeared, a pint of bloody, but undecomposed, urine was evac-

uated from behind the symphysis by a median abdominal incision, and a rent, commencing along the left side of the roof of the prostate, was detected in the antero-lateral wall of the bladder, by means of a median perineal incision. A drainage-tube was then passed through the suprapubic incision and the laceration, and confined by a suture at the former situation as well as at the perineal wound, and a second tube was retained in the bladder through the incision in the perineum. The cavity of the extravasation and of the bladder having been washed out with a 1 to 2000 sublimate solution, the wounds were dressed with iodoform gauze. The progress of the case was most satisfactory. The tube in the bladder was removed on the third day; the patient himself withdrew the other tube on the fifteenth day, when the urine was voided by the penis, and he was discharged at the end of another fortnight.

In making the diagnosis of laceration of the bladder, Dr. Weir states that if, after the catheter has evacuated its contents, it "passes in further, giving exit, in an ebb and flow movement corresponding to the respiration, to an additional quantity of urine, and this possibly of a different depth of color from that first drawn, the pathognomonic symptom is reached," and that the rupture is intraperitoneal if the beak of the instrument passes through the upper and back part of the viscus. In the absence of this sign, dulness on percussing the hypogastrium and the iliac fossæ is an important symptom, and points strongly to extraperitoneal laceration. The dulness, which is due generally to extravasated urine, increases more or less rapidly, and does not change its position with the movements of the patient.

Dr. Weir thinks that for ruptures involving the peritoneum, laparotomy, with closure of the vesical wound by means of sutures, is indicated, but that extraperitoneal rents should not be closed. In regard to this point, our own opinion is that sutures should be employed in all cases in which the laceration is accessible, and that the advice of Stein, that the lips of the rent in the bladder should be sewed in the abdominal wound, is injudicious, since, in the event of recovery, it will give rise to partial retention of urine.

THE REPORT OF THE GERMAN CHOLERA COMMISSION.

We published in our last issue the full text of Dr. Koch's sixth report upon Asiatic cholera, in which are contained some facts worthy of special note.

The first of these is the emphatic declaration that the bacilli found in the intestines of cholera patients are parasites belonging peculiarly to cholera, and that they are the cause of cholera. It is true, inoculation-experiments have failed with cholera bacilli; but, according to Koch, the demonstrative force of the facts above given is not weakened, as the same phenomenon meets us in other infective diseases, including leprosy and enteric fever.

The second is that the bacilli of cholera possess peculiar characters by which they can be distinguished with certainty from other bacteria. Thus, they are always somewhat curved, suggesting the shape of a comma, and sometimes they are almost semicircular. In pure cultures, these curved bacilli often give rise to S-like forms, and to wavy lines of varying length, the former of which correspond to two individuals, the latter to a number which have remained attached after proliferation. They possess, also, very active movements. In gelatine they form colorless colonies, which at first look as if they were composed of glittering fragments of glass. Gradually, these colonies cause the gelatine to melt, and then spread themselves out to a moderate extent; and by this peculiar appearance they are distinguished with great certainty from other colonies of bacteria.

Another important fact, consistent with what is known of the etiology of cholera, is that when the linen of cholera patients, after having been soiled by their dejections, has been kept for twenty-four hours in a moist state, the cholera bacilli are found to have multiplied in the most extraordinary manner. Hence the fact that the linen of cholera patients has so often proved the cause of infection. On the other hand, the bacilli die off, after drying, more quickly than almost any other form of bacteria—as a rule even after three hours' drying, every vestige of life has disappeared. This explains the fact that infection so seldom follows upon direct contact with cholera patients.

The same comma-like fungi were not found in any of a large number of similar, but not identical, conditions, such as dysentery and enteric catarrh. They were found to be confined to the bowel, having been only twice recognized in the vomit. They first appeared with the commencement of the disease, being few in number, but increasing as the attack culminated and diminishing as it declined.

Since it seems certain that the cholera bacillus enters the system through the stomach, and since it cannot live in the normal stomach, the question naturally arises what conditions permit its transmissibility through the stomach into the intestine, and there cause the disease. These as yet are undetermined; but it has been observed that those are especially liable to cholera who are suffering with indigestion. Such a cause as this is reasonable, and the supposition accords with our experience in other diseases. It is also conceivable that some form of persistent condition, other than that of the spore, exists, in which the bacilli can remain alive for weeks in a dried state, and in which they are capable of resist-

ing the destructive action of the gastric juice, but from which they can be developed when mingled with intestinal fluids.

VAGINAL HYSTERECTOMY.

PROFESSOR MUELLER, of Bern, has recorded four successful cases of removal of the carcinomatous uterus by the vagina, in the *Wiener Medizinische Wochenschrift*, No. 8, 1884, by a method which differs in several essential particulars from the operations heretofore practised.

With a view to avoid hemorrhage, he, in the first place, compresses the abdominal aorta with the fist, which is, as a rule, easily done, the walls of the belly being relaxed and thin in this class of subjects; and, secondly, preserves intact the large vessels by limiting his incisions to the anterior and posterior walls of the vaginal vault, thereby not interfering with the sides, in which the vessels ramify, that under other methods require many ligatures. The uterus having been retroverted through the posterior opening, provisional threads are cast around the broad ligaments, and the undivided vaginal walls, when the uterus is split vertically into two symmetrical halves. The resulting pedicles, which consist of the broad ligaments and the vaginal walls, are now tied with double threads, and divided near the two halves of the uterus, which are then removed. The vessels of the stumps, three or four in number, are next tied, whether they are bleeding or not, when the compression of the aorta is relaxed, and any other vessels of the stumps or of the vaginal wound are secured. After careful cleansing of the wound with a solution of corrosive sublimate, the stumps are permitted to retract, the ligatures are cut off on a level with the vulva, and a carbolized tampon is placed in the vagina. The latter is removed at the expiration of twenty-four hours, and the parts douched several times a day with the sublimate solution. The ligatures come away in the third week.

The novelty of Mueller's operation consists in the means employed to prevent hemorrhage, in not circumscribing the cervix with a complete incision, and in the vertical division of the uterus. The preservation of the lateral limits of the vaginal vault renders retroversion of the uterus somewhat difficult, but this is more than compensated for by the avoidance of bleeding. Hemorrhage does not attend the splitting of the uterus, as it has been guarded against by provisional ligation of the pedicles.

The merits of this procedure will be the more readily appreciated if it be compared with the operations of Schroeder and Fritsch, which were described in THE MEDICAL NEWS for December 15, 1883. Fritsch, who does the first cutting at the sides, states that he has sometimes had as many as twenty ligatures on a single side, and, as bleeding is one of the great dangers of vaginal hysterectomy, the method which best prevents it is, other things being equal, the one to be preferred.

EXTRAARTICULAR WIRING OF THE FRACTURED PATELLA.

IN the issue of THE MEDICAL NEWS for December 8, 1883, we called attention to the risks of approximating the fragments of a broken patella with silver wire. The risks, it will be remembered, are due to opening the joint, which suppurated in nearly one-fourth of all the cases in which the procedure had been resorted to, and which led to a mortality of nearly six per cent. It was for these reasons that we ventured to express the opinion that antiseptic suture of the patella should be restricted to old cases, or those in which ordinary measures had failed to bring about union.

DR. VAN DER MEULEN, of Utrecht, has recorded in the *Lancet* for March 22, 1884, three cases of recent fracture successfully managed with the wire suture without opening the knee-joint. In all of the operations, which were performed on the eighth, ninth, and twenty-fifth day after the accident, he found, after removing the clots of blood from between the two fragments, that a thin, but distinct, membrane existed between the posterior edges of the fragments, which acted as an effective barrier between the fragments and the cavity of the joint. By taking care to depress this membrane with a probe—the membrane being partially organized clot, or rather young connective tissue—while the canals are being drilled and the suture inserted, the cavity of the joint is not opened, and the risks of the ordinary procedure are averted. In one case the operation had to be repeated on account of refracture, but the final result was very good. In the remaining cases the functions of the joint were intact.

While Dr. Van der Meulen is to be congratulated upon his demonstration of an occluding membrane and upon the operation based upon its presence, which he has devised, we fancy that the generality of surgeons will demand a favorable experience with the method founded upon several hundred cases, before they will resort to it in recent fracture in preference to more simple measures.

IN the issue of THE MEDICAL NEWS of last week it was incorrectly stated that Dr. Packard had lost his case of ligation of the primitive iliac artery. The successful cases were those of Kümmell, McKinley, Mowret, and Packard for hemorrhage. Bickersteth, Caldas, Cock, Garviso, Hey, Lange, Luzenberg, A. B. Mott, V. Mott, Peace, Richter, Salomon, Sands, Schoenborn, and Syme for aneurism, and Guthrie for a pulsating tumor simulating an aneurism.

We hope the members of the profession in Philadelphia will not be led incautiously to give their approval to a series of impertinent questions with regard to vivisection which are being distributed by the so-called Anti-vivisection Society. The signing of the postal card upon which the questions are printed, binds the signer to favor certain legislation with regard to vivisection which is altogether unnecessary and uncalled for.

REVIEWS.

A Manual of Obstetrics. By A. F. A. King, M.D., Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Columbian University, Washington, D. C., and in the University of Vermont, etc. Second edition. 12mo. pp. 338. Philadelphia: Henry C. Lea's Son & Co., 1884.

In the preface to his first edition, the author speaks of his little book, as "an outline of the rudiments and essentials of obstetric science," and offers it as a groundwork for the obstetric student, by which he may be "prepared to understand and assimilate the extensive knowledge and classical descriptions contained in larger and more elaborate text-books." He confesses to have drawn very largely from the three well-known college text-books of Playfair, Leishman, and Lusk, and his manual may be regarded as an analysis of the usual teachings of obstetrical lecturers. The second edition corrects some of the opinions of the first, and is an improvement upon it, although only enlarged by a few pages. The fact that the first edition was so soon exhausted, shows that the work is popular, and that there is a demand for this style of treatise; one which can be carried about and referred to when a busy practitioner is desirous of refreshing his memory upon essential methods, etc., and has not time to consult a more elaborate treatise. As a condensation of knowledge, the book is quite a success, as the author has the faculty of saying a good deal in a few words, and he generally selects the best line of medication for treatment. Anyone wanting an analysis of obstetric science, will do well to procure this little volume. A country doctor might often be made the wiser by referring to it on the road, when he might not be able to carry a more complete treatise.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, March 25, 1884.

The Vice-President, Charles McBurney, M.D., in the Chair.

Dr. A. C. Post presented a patient upon whom he operated two weeks ago last Friday for

OCCLUSION OF THE RIGHT NASAL CAVITY FROM DEVIATION OF THE SEPTUM.

There was at the same time a periostosis of the nasal process of the superior maxillary bone. He separated the side of the nose from the cheek, and turned it over in order to get access to the obstruction, and then removed the protruding part of the septum and some of the superfluous superior maxillary bone. The nose was then turned back and secured, and the traces of the incision would not be sufficient to attract the attention of casual observers. The occluded nostril was quite free. It was probably a congenital deviation.

Dr. McBurney remarked that such deviation usually occurs to the other side.

Dr. H. B. Sands had performed the same operation, and found that it was very much facilitated by the separation of the ala nasi. He did not open the septum, but removed the projecting cartilaginous swelling, and some of the bony growth situated along the nostril, and the patient recovered without deformity.

Dr. Post said that he had in several cases divided the columna nasi, where the deviation did not extend so high up, which facilitated the operation very much, and by closing the columna no deformity remained.

DOUBLE RUPTURE OF THE TENDON OF THE QUADRICEPS FEMORIS.

Dr. Markoe presented, in behalf of Dr. Weir, a patient, seventy-two years of age, who had ruptured the quadriceps tendon of both patellæ. There was immediately above the upper margin of the patella the usual depression, abrupt upon both sides. The accident was caused by slipping upon a piece of ice, one knee giving way, and the other tendon rupturing almost immediately afterward. There was not only the depression immediately above the patella, but also the sharp edge on either side indicated where the aponeurosis had not been ruptured. There were, therefore, two strong fibrous bands left, which enabled him to make some extension of the leg at the time of the injury. A good deal of extravasation of blood occurred about the parts. The patient was treated by placing the limb in a straight position; a large amount of effusion took place into one knee-joint, but in the other not very much inflammatory reaction exhibited itself. The injury occurred three months ago, and the patient was able to walk slowly. Both tendons had united equally well.

FRACTURE OF THE HUMERUS AND SCAPULA, COMPLICATED WITH SEVERE INJURY OF THE ENTIRE BRACHIAL PLEXUS, FOLLOWED BY PARALYSIS.

Dr. Gerster presented a boy, eight years of age, who was run over by a wagon December 10, 1883. The exact mode of injury was unknown. It was alleged that immediately after the injury he could clinch his fist. He saw the patient for the first time ten days after the injury, and found an anæmic boy, with the pectoralis and serratus region widely suffused and discolored. The armpit was filled by a hard mass (coagulum) which caused a curious bulging of the right pectoral region. Fracture of the upper third of the shaft of the humerus was easily made out, but the lengthening of the arm with a wide displacement of the head of the humerus from the acromion accompanied by local crepitus, and also the fact that this deformity could be easily reduced but immediately reappeared, made the diagnosis of fracture of the neck of the scapula clear. There was absence of both brachial and radial pulse; there was paleness of the extremity, no œdema, but absolute

motor and sensory paralysis of all the branches of the brachial plexus. The fracture of the humerus was dressed with three pasteboard splints, but the fracture of the neck of the scapula presented no easy problem. Finally it was found that the fragments could be best retained in position by raising the splintered arm up by the bend of the elbow on a series of turns of a bandage wrapped over the shoulder of the same side, fastening all these turns by a series of turns passed around the thorax, and by a loop of bandage passed around the neck over to the other axilla. At the end of three weeks there was consolidation, with slight deformity of the humerus. The deformity was due to the necessity of lifting the shoulder by the elbow. The fracture of the neck of the scapula still showed crepitus, and therefore the bandage was continued. A pressure sore developed over the olecranon. The deltoid, triceps, and biceps showed no faradic irritability on January 15. Sensation of the skin showed a marked variability. One day it extended down to the upper part of the forearm, to disappear three or four days after up to the middle of the arm. The first nerve to show constant improvement was the musculo-cutaneous; the most tardy was the musculo-spiral. From the tenth day after the injury neuralgic pains, located directly in the palm of the hand, were felt by the patient. Pressure on the deep portion of the axilla caused intense pain up to the eighth week, when most of the large blood-clot had been absorbed. At the same time choreic, jerky contractions of both shoulders and the head commenced to be developed, which very soon yielded to the administration of Fowler's solution continued for about six weeks.

In spite of frequent readjustment of bandages and much care, it was very difficult exactly to retain the outer fragment of the scapula in a correct position; this, and the absence of a sufficient protection of callus usual at this place, resulted in a ligamentous union, with slight deformity, but good function.

In the fifth week, the hand became puffed up, reddish-blue, much colder than the other, the nails showing a deeper tinge.

By the middle of February, the deltoid, biceps, brachialis internus, and triceps commenced to respond to the will, but not to faradism, a circumstance first observed by Erb, and confirmed by Leegard and others. On February 26 they contracted on faradic irritation.

Supination and pronation were first observed on March 11, supination being less complete than pronation. On the same day, flexion of the fingers, excepting the thumb, was fully noticed.

To-day, flexion of fingers and thumb is well marked, extension very incomplete, but noticeable, and the prognosis seems to be decidedly hopeful.

The flexors respond very well to the galvanic, sluggishly to faradic, irritation. The radial pulse is still absent.

It seemed fair to conclude from the injuries observed, and the neurotic symptoms following them, that the plexus brachialis must have suffered a very severe contusion and laceration by the displaced fragments. The statement voluntarily made by the relatives that the hand could be clinched shortly after the injury, seemed to indicate that no rupture of the radial and median nerves could have taken place. No special treatment as regards the nerve lines was instituted, attention being chiefly directed to maintaining a good general condition.

Dr. Gerster also exhibited another patient who had had injury of the radialis caused by the fall of a heavy board on the lower portion of the posterior aspect of the arm. The patient was unable to extend the limb, and there was also the characteristic paralysis of the radialis, accompanied by the flabby condition of the forearm. It was of three weeks' standing. The contusion was of the arm, above the elbow.

DR. MARKOE related a case which was pertinent to the history of the injury and subsequent progress of Dr. Gerster's first case, occurring in a gentleman forty years of age, who was run over by a hack. Precisely how he was struck, or how he struck when he fell, it was impossible to ascertain. Dr. Markoe found fracture of the surgical neck of the humerus, which was oblique in such a manner that the upper end of the lower fragment projected into the axilla high up. He was very much disturbed to find that there was no radial pulse, and there was absolute loss of sensation and motion below the middle of the arm. The hand was blue and cold, and for twenty-four hours he apprehended the occurrence of gangrene; but this did not occur, although no brachial or radial pulse returned, and their absence had been permanent. From the time of the injury, paralysis of the muscles of the forearm was complete. Anæsthesia manifested itself particularly along the distribution of the ulnar nerve, which could be mapped out perfectly by the distribution of the paralysis, which was absolutely complete. After a time, the patient was able to make slight flexion and extension of the fingers; he has not been able to flex the thumb. The trophic changes have been precisely as usual in these cases, and the limb presented a glossy, puffy condition, and the palm of the hand, particularly, has exhibited a good deal of perspiration.

Appreciating that there was considerable displacement of the fragments towards the axilla, Dr. Markoe endeavored to try and reduce them as well as possible; but he did not dare to place any splint on the inside of the arm, lest he should increase the injury already done by the fragment, and, therefore, applied a very thin pad in the axilla, leaving the arm steadied against the side of the thorax, and supporting the elbow. The case had gone on through the history which had already been given by Dr. Gerster. In the fourth week, neuralgic pains began, which were very severe, and were referred especially to the palm of the hand, but extended along the ulnar side of the forearm down the fingers, and along the dorsal aspect of the radial side. At the present time, the bone is not firmly united.

From the lack of support upon the inside of the arm one unfortunate result had occurred, namely, the pectoralis and latissimus had drawn the fracture toward the chest, and pressure upon the parts in the axilla still existed to a considerable extent. Although the symptoms of paralysis had modified, Dr. Markoe was still at some loss to know what to do further in the treatment of the case. He had used faradism only, but proposed to use the galvanic current after further trial of the faradic. Dr. Weir Mitchell had obtained remarkable results in the treatment of neuralgic pains so common in such cases by the use of stimulating applications to the parts

to which the nerves are distributed, and had applied blisters successfully. Dr. Markoe had used strong liniments in his case for the relief of neuralgic pains, and with considerable benefit.

Dr. Post had seen cases of traumatic paralysis which had been promptly benefited by the application of moxas, either along the course of paralyzed nerves or near the seat of injury. He had also seen marked relief follow the use of the actual cautery.

SUBCORACOID DISLOCATION OF THE HUMERUS; PARALYSIS OF THE SERRATUS MAGNUS; ARTHROTOMY.

Dr. Gerster also presented a patient, Jennie M., twenty years of age, who was thrown violently against a tub, and sustained a subcoracoid dislocation of the humerus. The nature of the injury seems to have been overlooked by some physicians who saw the patient shortly after the accident, since they treated it with liniments and electricity. Seven weeks after the injury the patient came under Dr. Gerster's care at the Mount Sinai Hospital. The diagnosis of dislocation complicated with marked paralysis of the serratus of the corresponding side was readily made out. Reposition did not offer the least difficulty, but the weight of the extremity alone was sufficient to cause the reappearance of the dislocation. The reduced humerus was kept in a normal position for five weeks by means of an ample plaster-of-Paris dressing enveloping the arm, shoulder, and thorax. When it was removed it was found that the tendency to the reappearance of the dislocation was unchanged, wherefore operative relief was sought.

Arthrotomy by the anterior incision was performed on December 11, 1883. It was found that the inner aspect of the joint capsule, the side facing the axilla, was abnormally relaxed, and therefore a piece, one inch long and half an inch wide, was excised from it while the arm was forcibly rotated outwards. A counter-incision was made into the posterior part of the capsule for drainage, and capillary drainage by a fascicle of catgut strands was established. The anterior wound was closed by sutures. The autopsy had revealed that in a state of dislocation the distance between the glenoid cavity and the apex of the head of the humerus was fully one inch.

Six hours after the operation very alarming septic fever set in, with a temperature of 103° F., and great sickness and dejection. Although no local signs of disturbance were visible, Dr. Gerster deemed it prudent to remove the stitches, open up the wound, and seek the cause of the infection. Among the seven catgut ligatures applied, three were found to be much thickened, turbid, and infiltrated with and surrounded by an areola of pus. The remainder of the wound was found to be normal, the rest of the ligatures being slightly thickened but transparent. Suspecting the quality of the catgut used for the capillary drainage of the joint, the fascicle was likewise removed and replaced by a rubber drainage-tube. The wound was treated openly. The temperature fell to the normal, and the case progressed favorably. The tube was removed at the end of the second week, and the wound healed at the end of eight weeks. Healing was retarded by an attack of erysipelas commencing from the opening made for the drainage-tube at a time when healing was nearly complete.

The function of the joint is now fair, but promises to improve and become normal, since mobility of it is considerable, although very little orthopædic treatment had been employed.

FRACTURE OF THE PATELLA.

Dr. F. Lange presented a patient, a man sixty-two years of age, who illustrated the usefulness of a limb after fracture of the patella, in spite of a distance of three inches between the fragments. The patient had had fracture of the patella several times, and the last time the injury occurred three or four years ago, and there was also rupture of the crucial ligaments, as evidenced by hyperextension of the knee-joint and great lateral mobility. The plan of treatment which Dr. Lange adopted was similar to that recommended by Dr. Little, and the immediate result was very good; but after a time the gap between the fragments began to increase and afterward became quite extensive, and measured three inches; and yet the patient was able to walk quite well, could go up and down stairs, and could extend the limb very well.

CHOPART'S OPERATION.

Dr. McBurney presented a patient with the following history: Wm. Burke, aged 33, was admitted to Bellevue Hospital, on December 25, 1883, suffering from severe frost-bite of the extremities of both feet. The feet were treated with soothing applications, such as charcoal poultices, up to January 17, 1884; on that day I operated upon both feet: from the right removing the toes only at the metacarpo-phalangeal articulations; on the left doing Chopart's amputation at the medio-tarsal articulation. The foot and leg were first thoroughly cleansed with a solution of iodoform in ether, and irrigation with bichloride solution, 1 to 1000, was kept up throughout. Catgut ligatures were used, and a continuous catgut suture applied to the skin wound. A single bone drainage-tube was passed through at the base of the flap from one side to the other. The wound was covered with protective, dusted with iodoform, and enveloped in carbolized gauze and cotton, *great care being taken to force the astragulus and os calcis into extreme flexion.* To aid this effort, a pasteboard splint was applied to the back of the leg and to the under surface of the stump outside of the dressing, and firmly bandaged so as to maintain the position of forced flexion. The highest temperature reached by this patient after operation was 100° on two evenings.

The first change of dressing was made fourteen days after operation at my clinic. The drainage-tube had disappeared, and the wound was completely healed without a drop of pus. At one point was a minute pin-head point of granulation.

Some months ago I reported to the Society a case of Chopart's amputation, and in the discussion I expressed the opinion that sufficient attention was perhaps not paid after this operation to the position given to the stump. If the stump is left to itself, the powerful extensor muscles found on the back of the leg will inevitably draw the posterior end of the os calcis upward, and then allow the cut tendons of the anterior muscles to attach themselves too far up on the astragalus. I wish to call the attention of the Society to the fact that this patient can flex his short stump very freely, and that when he walks the stump has no tendency to point downwards.

Dr. Charles McBurney then read a paper on

CASES OF KNEE-JOINT EXCISION, WITH REMARKS.

(See page 409.)

Dr. C. T. Poore had excised nine knee-joints in children varying from four to sixteen years of age, and had had good results except in two cases. In one of these the patient died six months after the excision from abscess from disease of the dorsal vertebræ bursting into the lungs; in the other, the child would probably die from chronic brain trouble.

In the first case the consolidation of the bone was firm at the time of death; in the second, union is not firm.

In two cases he had had the same secondary complications. In one case necrosis of a small portion of the external aspect of the femur, in another of a portion of the external head of the tibia. Recovery took place in both patients after extraction of the sequestrum.

He had also experienced trouble from collection of pus in the synovial sac above. In some of his cases there had been more shortening than in Dr. McBurney's case, but he thought part of it was due to atrophy of the limb from disease. He did not think the bad issue in the two cases was due to the operation, but to the general condition of the patient. He had not seen very high temperature in any of his cases after operation. He always suspended the limbs in the after-treatment, because he thought he could take care of his patient better in this way, and it was more comfortable for them.

Dr. McBurney would like an expression of opinion as to the importance of wiring the bones together or introducing nails. He had reached the conclusion that it was not important. It seemed to him that the introduction of wires or nails, even with careful antiseptic precautions, had considerable disadvantages, as shown in several cases in which he had operated. The disadvantage being constant irritation where the wires have been brought out through the skin. The wires, however, might be buried, and the chances taken with reference to their exciting irritation. He thought that the leverage of the leg was too great to allow small wires in soft bones to resist any strain upon the parts, and even where nails had been introduced, as he had understood, they had become loosened long before any strong adhesions had taken place between the bones, except, perhaps, in young patients.

Dr. Lange thought that in using nails coaptation of the surfaces was much more intimate that it would otherwise be, and he also thought that this intimacy of coaptation secured a greater certainty of bony union than by resorting to any other method of uniting the bones. He believed, from the results of those who have resorted to this method more extensively, that the coaptation is so accurate that bony union is secured in a comparatively short time.

He had found in the fourth week after the operation that the nails were somewhat loosened, but still they were so fixed that it required considerable force to pull them out, and even at that period they contributed somewhat to fixation. In case you are obliged to change the dressing the coaptation of the bones which has been secured by nails or wires remains during the change of the dressing much more accurate than when they are treated by measures which keep the coaptation less firm and accurate. This question perhaps is not so important now as formerly, since we are accustomed to use permanent antiseptic dressings where the limb may remain untouched for months, or even longer.

With regard to the advisability of exsection of the knee-joint in such young patients, there is always so much shortening of the limb that he was inclined to the opinion that where exsection of the knee-joint in a child can be avoided it is well to do so, and try to repair the injured bones without opening the joint and searching for tubercular disease, if altogether the case is such as to make this plan of treatment practicable. He had succeeded in this way in one case. In other cases the disease was so extensive that a more extensive operation was necessary. In one case the result was a very good one, and he thought that a better chance was given for the development of the limb than would have been afforded if exsection had ben performed. So far as he knew, the growth of the limb might be shortened six or eight inches, so that entire disfiguration of the patient occurs in this manner.

With regard to prognosis, he thought it was much better in those cases in which ankylosis exists than in those in which fungoid disease is present. He had tried in some cases to obtain more free access to the synovial pouch by making a longitudinal incision as high up as the extension of the articular surfaces. The more fully the parts are exposed and search is made for diseased synovial membrane, the more is one apt to find that small abscesses exist in the capsule and about the joint where cheesy foci exist, which explain the fistulæ that are persistent.

Dr. L. M. Yale referred to a case which had a bearing upon the question of bony union. It occurred about twenty years ago, and was operated upon by the late Dr. Enos, with the result of obtaining apparently bony union. Some time after leaving the hospital, the patient fell, and was brought back, when it was found that the cicatrix had torn like a piece of cloth, and the bones had separated at the line of excision. On examination it was found that there had been partial union of the bone, as shown by what might be called stalactites running from one cut surface into the other, but at the same time the flat surfaces of the bones had united in some places by these bony prolongations, while in other places it had not. Dr. Yale replaced the limb as nearly as possible in the straight position, and the boy made a good recovery with somewhat greater flexion than existed before the receipt of the last injury.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 5, 1881.

The Vice-President Horace T. Hanks, M.D., in the Chair.

Dr. H. J. Garrigues read a paper on

THE REMOVAL OF THE PLACENTA.

The correct title of the paper, he said, was "The Removal of the After-birth," which term included both the membranes and the placenta, and it was also more appropriate from the fact that he did not intend to treat on this occasion of the delivery of the placenta in cases of abortion.

It was now thirty years since Credé had published his views on the treatment of the third stage of labor, and since this original publication he had repeatedly reiterated his conviction of their soundness. His idea was that the placenta should be removed, not by means of traction from below, but of pressure from above. Dr. Garrigues then described the details of Credé's method. He advised that the hand should be placed on the abdominal walls over the uterus after the delivery of the child, and that when it was felt to contract it should be firmly grasped by both hands, with the thumbs in front; when, as soon as the contraction had reached its maximum intensity, the whole organ was to be pressed downward in the direction of the hollow of the sacrum. One contraction was rarely sufficient to expel the placenta. Sometimes this was accomplished at the third contraction, but more usually it was not until the fourth, and it was an error to make pressure between the contractions.

Of late years some of the German authorities had raised objections to the Credé method; their chief criticism being that it was liable to give rise to retention of the membranes. This objection, he thought, was entirely groundless. During the last eight years he had practised the method constantly, and when he was appointed to the Maternity on Blackwell's Island, he introduced it at that institution. He could only say that it had given perfect satisfaction, and that he had never seen any bad results from it whatever. During the last two terms of service at the Maternity Hospital there were 408 confinements. Two of these were cases of abortion, in which the placenta was adherent, and in both he removed it by means of the dull wire curette and forceps. In 6 cases beside these there was retained placenta, and in 6 others the whole or a portion of the membranes was retained. In 6 out of 400 cases, therefore, the Credé method failed to deliver the placenta, a percentage of only 1½. In 4 of the 6, however, there was an abnormally intimate connection between the placenta and the uterine walls; so that there were in reality only 2 cases out of 400 in which it failed, or one-half per cent. In these the placenta was not adherent, but simply retained. True adherent placenta, such as occurred in the 4 cases just mentioned, was very rare; the so-called retained placenta being due, as a rule, merely, to improper treatment. In 6 cases, or one and one-half per cent., more or less large shreds of membrane were retained. In order to remove these, the whole hand was introduced into the cavity of the uterus in one instance; but in the rest this procedure was unnecessary. Credé said that he had not observed any bad effects from the retention of portions of the membranes, and advised that they should be allowed to remain undisturbed. Dr. Garrigues, on the other hand, had seen very serious results follow the retention of membranes, such as alarming post-partum hemorrhage; and, therefore, he thought there could be no question that it was best to remove any retained portions. Where this was necessary, disinfection should always be practised, and he had formerly used a five per cent. solution of carbolic acid for the hands, and a two per cent. solution for washing out the uterus afterwards. Since October, 1883, however, he had employed bichloride of mercury solution, of the strength of 1 to 2000, exclusively.

The great utility of the Credé method, it seemed to him, was due to the fact that it was strictly modelled on the regular course of nature, so that its effect was simply to assist the normal process of completing the act of parturition. After the powerful efforts kept up by the uterus during the second stage of labor, there was, as a rule, some atony of the organ resulting. There was thus, at this time, a call for artificial aid in getting rid of the placenta, and this needed stimulus to spur the uterus on to renewed action was supplied by the compression and pressure applied in the manner Credé indicated. Contraction of the uterine muscles was thus brought about, and Dr. Garrigues now described the two groups of bundles entering into the muscular structure of the organ, the action of the first of which (the concentric ones) was, he said, to bring the fundus towards the os, and of the second (the bundles which had attachments upon the bony pelvis), to draw the uterus down into the pelvic cavity, at the same time that they tilted the fundus forward and the cervix backward. He then went on to say that by means of the compression of the fingers and thumbs of the accoucheur the uterine walls were brought near together, and that the pressure downwards on the fundus drove the organ towards the hollow of the sacrum, while the contact of the placenta against the cervix also tended to open the os.

By shortening the third stage of labor, Credé's method had a direct tendency to prevent *post-partum* hemorrhage. In the four hundred cases referred to, there were but two instances of such hemorrhage of any severity, although in two others there was a slight loss of blood above the normal. In all these cases the hemorrhage occurred before the expression of the placenta was made, and in not a single instance afterwards. When properly performed, the procedure was, undoubtedly, the best means of preventing post-partum hemorrhage.

Inversion of the uterus, which was facilitated by traction on the cord, was promptly counteracted by the Credé method. He had even known avulsion of the organ to be caused by traction. In some cases the *vis a tergo* was so great, when pressure was properly applied, as to expel the whole after-birth completely outside the genitals; and where this did not occur, it was recommended that before withdrawing the placenta the membranes should be twisted into a kind of string. As a rule, however, there was no necessity for introducing the fingers into the vagina (which was liable to be followed by much more serious consequences than before the delivery of the child), and the avoidance of this constituted a part of the modern antiseptic treatment of labor. Dr. Garrigues explained that, contrary to the usual practice on the Continent and in many parts of the United States, he placed the parturient woman on the left side during the second stage (which, he believed, was attended by several important advantages), but said that after the delivery of the child he had the patient turned upon her back, which was the most advantageous position for the delivering of the after-birth.

In Credé's last published communication he had reported that in two thousand cases of labor the average duration of the third stage was four and a half minutes; but in his own cases the average was somewhat greater. It was to be remembered, however, that in Europe the medical attendant in charge at lying-in hospitals re-

tained his position for a number of years, and, consequently, had the opportunity of becoming very expert in all the manipulations incident to the conduct of parturition, while in the Maternity on Blackwell's Island the resident accoucheurs are changed every two months. But, in his opinion, it was altogether immaterial whether a few minutes more or less were occupied in the third stage of labor. The important point was, that from the time of the delivery of the child the uterus should be kept in a contracted condition, and that expression should be made only during the occurrence of the special contractions.

Dr. Garrigues then went on to say that, as the originality of Credé's method had been impugned in certain quarters, he had taken the trouble to look over all the old obstetric authorities that were to be found in the library of the New York Hospital, and found that these could be arranged in three classes. The first spoke of traction only in the delivery of the placenta; and the second, comprising a very considerable number of distinguished names, advised rubbing and pressure over the fundus, through the abdominal walls, in connection with traction on the cord; while a third class, composed of Johnson, Sinclair, and Murphy, who had all been assistants at the Dublin Lying-in Hospital, especially advocated friction and pressure with the hand on the abdomen, which, they claimed, was often sufficient for the delivery, though at the same time they advised traction on the cord. So, therefore, while many English writers, and especially those of the Dublin school, are undoubtedly entitled to some credit in the matter of uterine pressure, it was reserved for Credé to enunciate distinctly the following important points:

First. That uterine pressure is applicable in all cases.

Second. That the uterus should be grasped from all sides.

Third. That it should be squeezed with decided pressure downwards and backwards, in the direction of the pelvic brim.

Fourth. That the cord and placenta, as a rule, should never be touched until after the expulsion.

Fifth. That the fingers should not be introduced into the genital canal.

He then enumerated the advantages of the Credé method as follows:

First. Its certainty of action.

Second. Its influence in exciting uterine contraction.

Third. The prevention of hemorrhage.

Fourth. The prevention of hour-glass contraction of the uterus.

Fifth. The prevention of uterine inertia.

Sixth. The prevention of avulsion of the cord or uterus.

Seventh. The prevention of inversion of the uterus.

In regard to the disadvantages of the old method, he thought it was unnecessary to speak, as they are just the opposite of the points enumerated. There was still another plan of treating the third stage of labor, which was usually known as the Strassburg method, and which consisted simply in the absence of any kind of interference whatever. This had been tried as an experiment, and the results in one hundred cases reported were as follows: In twenty-four cases the placenta came away within the first half hour; in twenty, within the second half hour; in twenty-five within two hours; in eleven, within three hours; in nine, within four hours; in five, within five hours; in three, within six hours; in two, within eight hours; and in one, within twelve hours. In every instance the fœtal surface of the placenta presented first. In two cases hour-glass contraction of the uterus occurred, and in one there was a very decided putrid odor. Dr. Garrigues said that he failed to see a single advantage. The process was not even a natural one, since the recumbent position was unfavorable for the expulsion of the placenta. Among uncivilized nations it would seem altogether likely that the parturient woman, if recumbent during the second stage of labor, would change her position after the birth of the child, and Dr. George J. Engelmann, of St. Louis, in his exhaustive study of parturition among savage peoples, stated that the delivery of the placenta usually followed soon after that of the child, but, if it did not, massage over the abdomen was frequently resorted to. Even among animals it had been observed that an effort was sometimes made to assist nature, and Dr. Sussdorf, in his interesting account of the labor of an elephant, related that after the birth of her offspring, the mother pressed her abdomen with great force against the stake to which she was chained, in order to facilitate the delivery of the after-birth.

In the four hundred and eight labors at the Maternity to which he had referred there was no case of hour-glass contraction, and statistics showed that this occurred much more frequently in cases in which no compression was used than in those treated by the Credé method. In conclusion, Dr. Garrigues said that it was scarcely necessary to point out that it was highly dangerous to leave a placenta in position until it began to stink. While the prudent accoucheur would not allow a retained placenta to remain too long, there was, as a rule, however, no need of haste in making active interference. All that was required was that he should abridge the third stage of labor only to such an extent as to keep his patient from the dangerous consequences liable to ensue from too prolonged inaction.

DR. ALEXANDER HUNTER said that he fully endorsed the conclusions of the author of the paper, and that he would speak upon only one point, which was, the desirability of commencing the uterine pressure just before the delivery of the child. He believed that the uterus should always be allowed to expel the fœtus from itself as well as from the vagina, unless the child is in danger of suffocation. By this early resort to compression the delivery of the placenta was very much shortened, and the danger of post-partum hemorrhage diminished.

DR. ALEXANDER HADDEN thought that intelligence and coolness on the part of the accoucheur were necessary for the proper treatment of the third stage of labor, and that serious consequences were very liable to result from bad management. Among these might be mentioned hemorrhage, septicæmia, and a condition of subacute inflammation. Catarrhal troubles, which rendered the patient an invalid for years, and upon which much of the gynecologist's labor depended, frequently originated, he believed, in this way. During the last twenty-five years he had attended some twenty-three hundred cases of labor, and he had never lost sight of the importance of attending with great care to the delivery of the after-birth. In his last thousand cases

there had been but one death from post-partum hemorrhage, and this fatal result occurred in a patient who was the subject of *purpura hæmorrhagica*. In the removal of the placenta he had been accustomed to depend partly on pressure and partly on traction on the cord, always taking care to see that the uterus was properly contracted (with a distinctly globular outline), and watching the patient for at least an hour and a half after delivery.

As to the production of inversion of the uterus by traction on the cord, as claimed by Dr. Garrigues, he confessed that he was somewhat sceptical. He had always been accustomed to employ traction, though invariably in a gentle manner, and the only case in which he had ever seen any attempt at inversion, was one in which this occurred before any effort at all, by traction, or otherwise, had been made to deliver the placenta. There was profuse hemorrhage, and a cup-shaped depression was noticed in the top of the uterus through the abdominal walls, while through the os the fundus could be felt. Carrying his hand up into the uterus, he restored the partly inverted organ, but found great difficulty in getting the fundus to retain its normal position. The circular fibres of the uterus seemed entirely relaxed, while the active contraction of the longitudinal fibres tended constantly to force the fundus down. By the persevering use of ice and pressure, however, he finally succeeded in securing the normal contraction of the entire organ; up to that time he had believed that traction might cause inversion, but since seeing this case it had seemed to him probable that the inversions which had been attributed to traction might, in reality, be due to entirely different causes. In this instance he believed that the placenta was attached to the fundus, and that the effort to expel it had tended to cause inversion of the uterus. Attachments in this position, he thought, were rare.

Dr. Mary Putnam-Jacobi believed that the Credé method was the only one that ought to be used at the present day, and that it would be superfluous to make any comment on the views expressed in the paper, which were undoubtedly the correct ones. There were, however, one or two theoretical suggestions which she would venture to throw out. The expulsion of the placenta was something which was being prepared for, all through the later weeks of utero-gestation, by the formation of thromboses. Up to the time that the uterus was expected to contract, the circulation of the organ was predominantly venous, since this was most appropriate for its growth. But now, however, it became of an arterial character, as arterial blood alone could furnish the stimulus necessary to produce muscular contraction. Hence the venous blood gradually became cut off by the formation of thromboses at the edges of the placenta, and by the migration of leucocytes, which tended to block up its passage. In cases in which there was a failure of uterine contraction, therefore, it was natural to suppose that there had been an abnormal continuance of the venous circulation, and that, consequently, the necessary arterial stimulus was lacking. The Credé method was entirely philosophical, because the pressure tended directly to diminish the amount of venous blood, and thus assisted nature in continuing the process which she had already begun.

Dr. Paul F. Mundé said that he had, unfortunately, come in too late to hear the paper, but he would nevertheless give expression to a few thoughts which occurred to him in connection with the subject of which it treated. When, thirty years ago, Credé had advanced his views on the delivery of the placenta, it was generally believed that the true method had at last been reached, and that its adoption would entirely do away with all the ills incident to the third stage of labor, particularly the occurrence of post-partum hemorrhage. These anticipations had, however, not been altogether realized. He himself had been taught the Credé method in Germany, and had constantly practised it for a number of years. As a rule, he had been satisfied with it, but occasionally he had found that too rapid expression of the placenta gave rise to uterine inertia and the retention of more or less of the membranes. He had come to the conclusion, therefore, that it was best not to hurry up matters too much, but to allow plenty of time for nature to act. Beginning with the delivery of the child's head, he was in the habit of placing the hand on the abdomen and making gentle friction over the fundus. Before the expulsion of the placenta the latter would be found to reach as high as the umbilicus; but if the uterus extended only half-way between the symphysis pubis and the umbilicus, and was of a well-marked spherical shape, we could be certain that the placenta was no longer in the cavity of the organ. Delivery of the after-birth was not always possible by the Credé method, for in some cases, while the hardness, lobular outline, and reduced size of the uterus, as felt through the abdominal walls, indicated that it was no longer in its cavity, neither did the placenta appear at the vulva. In such cases it was retained in the cervical cavity, and in these instances the cervix was usually of exceptional length. Here it was advisable to make slight traction on the cord, or, what was better, to introduce the fingers, or even the whole hand, into the vagina and withdraw the placenta. If the ordinary precautions of cleanliness were used, he did not think that the latter procedure was attended with the slightest danger to the patient. As he had before remarked, if the placenta were removed too rapidly, it would be stripped, and the membranes left in the uterus, and he thought it was necessary, therefore, that Credé's excellent directions should be followed closely. If properly carried out, the pressure would cause contractions which would result, first in the detachment, and then in the expulsion of the after-birth. Dr. Mundé then went on to say that formerly he had to remove more placentæ by introducing the hand into the uterus than was now the case, and he believed that the more carefully Credé's method was followed up, the less danger there would be of retained placenta.

When the placenta was loose in the uterine cavity, but retained therein by the contraction of the os (the encysted placenta of Barnes), the plan of expression was of no use, and traction on the cord was worse than useless. In such cases it was advisable to secure relaxation of the circular muscular fibres by means of chloroform. There was one point which he was always very particular to carry out, and that was, to examine the placenta and membranes with great care after their delivery, to make sure that the after-birth had come away entire; and if he found that any portion was left, he at once passed his hand, disinfected with an appropriate antiseptic solution, up into the cavity of the

uterus and removed it. He did not believe in leaving the matter to nature, for, while the retained membrane or portion of placenta, might perhaps not do any harm, the danger of evil results was so great that, in his opinion, it was simply criminal not to interfere. Where the hand had been introduced, it was always advisable to wash out the uterus with an antiseptic solution, and he would now employ corrosive sublimate for this purpose. Hot water, he believed, was better than cold, but in order to be of service it ought to be really hot, and there was more or less danger of the temperature being so high as to do injury. In certain cases in which the Credé method had to be kept up for a considerable time, and the necessary manipulations gave rise to more pain than was desirable, he thought it well to follow up the pressure by gentle traction on the cord.

DR. FRUITNIGHT did not believe in a let-alone policy, but thought that as the placenta had fulfilled its function, and, after the delivery of the child, became in a manner a foreign body, it should be gotten rid of as soon as possible. As a rule, the Credé method was undoubtedly the best.

DR. ISAAC E. TAYLOR, after some preliminary remarks on the great care with which the third stage should be managed, spoke of the shortening of the time occupied by it, which had been claimed for the Credé method. This he did not believe was a matter of importance, since the expulsion of the placenta was a physiological process, and there was no necessity for being in a hurry about it. Nature prepared the way for it, and showed us how to act in such a way as to assist her; but improper interference could not fail to do more harm than good. In all his experience, he had not had to introduce his hand into the uterus six times for the removal of the placenta. He used no traction on the cord, but, gently taking hold of it, he passed the fingers up to the cervix, the stimulation of which produced a reflex action which excited the fundus to contract. It was easy to discern to what portion of the uterine walls the placenta was attached, and when this was done, a little modification of the position of the patient would often facilitate the delivery. Thus, for instance, if the attachment was posterior, it would be of service to extend the lower extremities. If the placenta did not come away readily, however, there was not the slightest necessity for hasty interference. If the hand were introduced violently into the uterus, the procedure might be followed by bad consequences, and it was much better to wait for a considerable time before resorting to such a measure. If the after-birth did not come away within twenty minutes or so, there was no harm whatever in waiting one or two hours, if necessary, and nature was generally competent to bring the matter to a successful issue herself. Credé's method, Dr. Taylor remarked, in closing, was not applicable if the placenta was attached posteriorly, looking backward.

DR. RANSOM thought that the best way of delivering the after-birth was to employ gentle traction on the cord, in connection with moderate but firm pressure over the fundus. Out of seven hundred and forty-three cases in his own practice, he had found it necessary to introduce the hand into the uterus to accomplish the removal only in three or four instances, and in all these he found chalky granulations present both on the uterine walls and the placenta. One of these resulted fatally from peritonitis four days after delivery; but he believed that this was due to the fact that, unknown to him, the nurse had been employing hourly vaginal injections. The average duration of the third stage of labor had been fifteen or twenty minutes in his hands.

DR. E. H. M. SELL said that he thought it was not advisable to adhere strictly to any one plan in all cases, but to be guided more or less by circumstances. In the early part of his professional career, influenced by the teaching of Prof. Taylor, he took from half an hour to an hour and a half to deliver the placenta; but more recently the third stage usually occupied fifteen or twenty minutes. Denham, as early as 1800, had given expression to views similar to those of Credé, but it remained for the latter to perfect the method. Personally, however, he would not tie himself down to any one plan. In only one case had he found it necessary to introduce the hand into the uterus. This was after the delivery of a monstrosity, the case being complicated by a short cord, as well as adherent placenta; and he interfered because hemorrhage was taking place. He believed, with Dr. Mundé, that too rapid carrying out of Credé's method was very liable to result in inertia of the uterus.

DR. GARRIGUES said, in bringing the discussion to a close, that it was quite natural that the three methods of which he had spoken in his paper should all have their champions to a certain degree, but he did not believe that any one present would be willing to trust exclusively to the do-nothing plan. All were agreed, he thought, that the delivery of the after-birth was a physiological process, and that our efforts to facilitate it should be in imitation of nature. There might be a diversity of opinion as to how this could best be done, but he had endeavored to show that the different points in Credé's method had precisely the same effects as the natural process. Traction on the cord, however, was not a natural process, and there was nothing in the physiological action analogous to it. If it were used at all, the traction ought to be as gentle as possible, but he himself went so far as to claim that in the vast majority of cases it should never be resorted to at all. In regard to Dr. Hadden's case of partial inversion, he remarked that this kind of paralysis of the portion of the uterine wall to which the placenta was attached was one of the recognized causes of inversion. He had not claimed that this accident was always caused by traction, but he did not doubt that it was sometimes due to it. In regard to the use of hot or cold water for injecting the uterus after the hand had been introduced into its cavity, he said that he preferred the hot, on account of its stimulating effect, although he acknowledged that there was danger of having it at too high a temperature. He was unable to understand how Dr. Taylor could tell when the placenta was attached without introducing the fingers or the hand into the uterus. He entirely agreed with the latter that it was bad practice to resort to early interference of a violent kind in retained placenta. With the Credé method the after-birth, as a rule, came away in a few minutes, but if it did not, it was his practice to wait for at least an hour and a half before introducing the hand into the uterus. He did not think it was right, however, ever to wait until the placenta had begun to decompose.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, April 3, 1884.

The President, R. A. Cleemann, M.D., in the Chair.

Dr. Cleemann made some remarks on the subject of

DIGITAL DILATATION OF THE OS UTERI DURING LABOR.

He had been taught not to dilate or stretch the os uteri with the finger, and for years this early teaching deterred him from making any attempt to supplement the contractile powers of the uterus by assisting in the process of dilating the os. Some time since he was called to attend a primipara, the waters had been discharged the previous day, the pains had continued, but the os uteri was very small and the cervical rim hard and unyielding. He felt called upon to interfere actively, and tried to dilate the os with his finger; it softened rapidly, and in half an hour was sufficiently dilated to allow the head to pass, and delivery rapidly followed. Since that occasion he has tried the same procedure on several cases, and always with gratifying results, the labors being brought to rapid terminations where previously hours had been wasted in weary and painful waiting. The irritable condition of the os, which has been lectured upon as the consequence of such interference, has not been experienced; no injury has resulted in any case. The soft finger can do no more harm, if clean, than a Barnes's or other form of dilator, and there is no danger, as in the case of the latter, of pushing the head aside and converting a vertex into a shoulder or other faulty presentation.

Dr. W. T. Taylor said he had dared to deviate from the teaching of Professor Hodge, and had used his finger to assist the dilatation of the os; but he did not do so if the cervix was irritable or its edge wiry.

Dr. Githens had practised digital dilatation of the os uteri throughout his obstetrical practice, a period of eighteen years. He does not confine it to any class of cases, nor does he wait until after the membranes are ruptured. In any or all cases he finds that a "pain" is accompanied by a contraction of the circular muscular fibres of the cervix as well as by a contraction of the longitudinal fibres of the body of the uterus. The contraction of the circular fibres retards the progress of the labor. The intention of the digital distention is to paralyze these circular fibres, and thus favor the dilatation of the os. In practice this effect is rapidly produced, One or two fingers are swept around the inside of the cervix, the pulp of the finger being next the cervix, and the latter is pulled away from the head. This operation is kept up during the interval between pains; when the pain occurs the finger is withdrawn; the operation is repeated in the next interval. The membranes are not ruptured by this process. The irritable condition of the os, if such exists, is subdued. If the rim of the cervix is wiry and thin, or hard and thick, it softens and yields; the cervix and vagina, if hot and unyielding at first, become cool and pliant; cervical tears are almost entirely avoided, and the time, pain, and exhaustion of the labor are reduced to a minimum. The process is useful in every case of labor throughout the first stage.

Dr. Philip M. Schiedt practises digital dilatation largely. His patients say they recognize the assistance it gives them, and in subsequent labors ask him to help them. By the great shortening of the first stage of labor resulting from this method, the use of the forceps is frequently avoided.

Dr. Parvin said he would be sorry to see digital dilatation adopted as a rule for all cases. He thinks it shortens labor by increasing the uterine contractions, and not by dilating the os. Voluntary efforts at bearing down are not needed during the first stage, they are dangerous rather than helpful. The method may be useful in some cases after the rupture of the membranes, which is the natural dilating agent. There is also danger of septicæmia from germs on the fingers. He does not think the fingers so good a dilator as Barnes's dilator, because they do not press equally on all sides of the os, but only on one point at a time, and thus cause an unequal thinning, with danger of laceration. He thought the danger of a change of presentation by the use of Barnes's dilator very slight. He would prefer a mechanical dilator to the finger whenever dilatation was necessary, but thought something ought to be left to nature. Any sort of interference carries a possibility of danger.

Dr. Elliott Richardson thought that there was a possible danger of rupturing the membranes.

Dr. R. P. Harris remarked that one point had been overlooked. Why does the os not dilate easily when the head is the dilating agent? It is because it is a round surface over which the cervix does not slide easily. On the contrary, the finger is applied at successive points. One benefit of the method is that any change or danger is at once detected. The method should not be used indiscriminately, and we should not interfere unnecessarily.

Dr. Cleemann would not recommend the method in every case of labor. He has resorted to it in cases in which there has been early rupture of the membranes and the assistance of the bag of waters has been lost. In a recent case, he saved a patient hours of suffering, and the os was not bruised or injured in any way. The sight of any instrument causes the patient much anxiety, and the exhibition of the Barnes's dilator, and the water, syringe, etc., causes nervous excitement. The bags sometimes burst, and thus give the patient a terrible shock with the added discomfort of the escaping water or air. He has always carried them, but does not like to use them.

EXANTHEMATOUS DISORDERS IN THE PUERPERAL STATE.

Dr. Parvin had recently had an experience of the invasion of measles and scarlet fever in the obstetric wards of the Philadelphia Hospital. In the first case in which measles occurred, he did not think that the full term of pregnancy had been reached. Authorities state that premature labor is usually caused as a result of the high temperature of the exanthematous fever. One patient had septicæmia in addition, but recovered. The infants were not affected. In one case, soon after labor the temperature rose to 103°, and the patient was sent to the fever ward. At the second visit a slight rash was observed, which subsequently proved to be scarlatina. Desquamation was very abundant. Albuminuria was very marked on the tenth day. Rheumatic pains were also felt. The patient recovered. The child remained well. Children have been born with measles, but he did not know of such an experience with scarlet fever.

Dr. W. T. Taylor some fifteen or twenty years ago,

had reported in THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, 1853, a case of congenital smallpox. The mother had some febrile symptoms and pain in the back, and the child had the disease. He had a case of scarlet fever in a mother two days after labor; it proved fatal in two days; the child lived.

CORRESPONDENCE.

DOWNWARD DISPLACEMENT OF THE TRANSVERSE COLON.

To the Editor of THE MEDICAL NEWS.

SIR: An article with the above title, from the pen of Dr. C. H. Thomas, of Philadelphia, appeared in the *Boston Medical and Surgical Journal* of January 3, 1884. The writer states that the lesion seems to be of rare occurrence, and that Dr. Formad, of Philadelphia, in a series of autopsies numbering over two thousand, had not observed a similar case. Further, Dr. Formad, after thorough examination of the literature of intestinal lesions, had not met with any record of misplacement of the transverse colon.

From the fact of Dr. Thomas meeting with three cases, it would be fair to infer that the lesion is not as rare as has been supposed. In an autopsy of my own, made January 17, 1884, on a mulatto woman, aged sixty, who died of consumption two days previously, the "arch of the colon was low down in the iliac and hypogastric regions." Delafield mentions that it may be lower than the umbilicus; Orth, that it is sometimes depressed in the form of a loop, which may extend even into the pelvis; and Rokitansky, that it may descend into the hypogastric region. Turner (*Human Anatomy*, Edinburgh, 1877, p. 714) uses the following language: "Owing to the length of the transverse meso-colon, which forms its peritoneal attachment, it not unfrequently undergoes some change in its position, and may hang downwards toward the pelvis, or be elevated in front of the stomach or thrown to the right or left side. This tendency to displacement of the transverse colon should be kept in mind in the diagnosis of diseases of the abdominal viscera." Leube (Ziemssen's *Cyclopædia*, translation, vol. vii. p. 342) says that it may sink below the umbilicus. Charles Bell, and Sharpey and Quain speak to the same effect. So also Harrison (*Anatomy*). Bichat remarks the mobility of the transverse colon, which sometimes permits displacement. Cruveilhier says, "It is not rare to see it at the level of the umbilicus or even in the hypogastric region—even in the pelvis." He regards the corset as a main cause in women of the displacement downwards. He recites a case of an old woman in whom the arch descended perpendicularly, parallel with the ascending colon, passed into the pelvis, and then ascended to the left.

The *Index Catalogue of the Library of the Surgeon-General's Office* indicates several authors, under the head of colon anomalies. One case is by Maldern (*Midland Med. and Surg. Reporter*, i., 1828–9, p. 53). The transverse colon passed downwards to the right iliac region, and then ascended to the left hypochondriac. The displacement was not recognized during life. Esquirol (*Journ. Gén. de Méd.*, lxii., 1818, p. 341, and lxiii., 1818, p. 176) contributes cases of the same sort in the insane. In one, the transverse colon descended perpendicularly to behind the pubis; in a second, a similar variation; in a third, the same; in a fourth, it reached to near the pubis; in a fifth, it reached quite to the pubis; in a sixth, the same; in a seventh, nearly to the pubis; in an eighth, to the pelvic cavity. Some of these were women, some were men. Esquirol thought that the phenomenon had not previously been noted. He found that the arch was in such cases usually empty. He adds that the insane people in whom he found the lesion were mostly affected with melancholia, and often complained of epigastric pain, likening it to a band around the hypochondria; the stools were generally bad. He did not, however, think that these symptoms explained the misplacement of the colon. Erdmann (*Archiv für Med. Erfahr.*, Berlin, ix., 1806, p. 98) mentions the occurrence of this lesion, and says that he found it very often ("sehr häufig bei Sectionen"). He gives cases, and says that he finds it mostly in women, and attributes it then to their wearing "stays." In his three cases, he found also a perpendicular direction of the stomach.

Roth (*Pathologia intestini coli*, Erlangen, 1803); Vater (*Diss. de situ naturali et præternaturali intestini coli*, Wittemberg, 1737); Leuringk (*De morbis a situ intestinorum crassorum pendentibus*, Goettingen, 1756), are said to have noted the displacement. Roth does give a case of displacement downward to the pubis, of the colon distended with flatus and feces; the case was narrated to him by another physician. The other two authors I have not been able to see.

Sylvius (opera, 1679, p. 185) mentions under the caption *De Variis Intestinorum Doloribus*, the deviation of the colon to the umbilicus and even sometimes to the bladder. Morgagni (*De sedibus et causis morborum*, translation, London, 1769, vol. ii. p. 125) in his thirty-fourth letter says:

"When that part of the colon which generally runs in a transverse direction to the direction of the body, and lies in contact with the stomach, is not really in that place, but is so remarkably inflected downward, there is no doubt but those persons must err, who deny that this part of the colon is seized with pain, by reason that the pain and torture do not run across the upper part of the belly, like a belt . . . and that what Sylvius has warned us of, does, in fact, frequently happen to the colon, not a few of the observations, both of Valsalva and of mine, which have either been already proposed, or are to be proposed hereafter, will confirm; although I have not had, nor shall have, occasion to take notice of, in these letters, all the bodies in which I have found it thus; for it is long since that I began to observe this variation, even before I happened to light on this passage of Sylvius, as the second of the adversaria (see Morgagni, adversaria anatomica, 1762, p. 33) will demonstrate . . . In those persons likewise, in whom the stomach is much dilated, and the liver enlarged in its size, that transverse part of the colon which lies under these viscera must be lower in the same proportion as they are enlarged. Add to these such causes as depress the stomach, and with it the colon, as I have seen it happen in a young man of Venice, from a very irregular inflexion of the spine. But besides diseases, there are also naturally different constitutions of bodies, and in these different constitutions different situations of the colon."

I have quoted so fully from Morgagni, because of his well-known erudition and close and ample observation.

This research might be extended, but sufficient has already been given to show that the downward displacement of the transverse colon is not so infrequent, but that the fact of its occurrence should ever be kept in mind in abdominal diagnosis; even of hernia in which this colic arch sometimes takes part.

Very respectfully yours,

D. S. Lamb, M.D.,
Army Medical Museum.

Washington, D. C., March 31, 1884.

A YEAR'S WORK IN OVARIOTOMY.

To the Editor of The Medical News.

Sir: I am bound to say that Prof. Goodell is right in pointing out that Dr. Sutton's words are likely to give rise to misunderstanding. Dr. Sutton stopped with me here for about three months, and I don't know whether or not he saw me remove large tumors with extensive adhesions. It would be a matter of chance anyway, for cases nearly always go in "runs." In order that the nature of my work may not be misunderstood, kindly allow me to say that last year I removed eighty-two tumors of the ovary and parovary, with only two deaths. Two of these were very small dermoid cysts. The remaining eighty had an average weight of about twenty-seven pounds, the largest being about one hundred and twenty pounds, and the smallest eleven pounds. Twenty-seven of the cases are noted as having "extensive adhesions," nine "being universally adherent," and all of these twenty-seven recovered.

I am yours respectfully,

Lawson Tait.

Birmingham, March 26, 1884.

NEWS ITEMS.

WASHINGTON.

(*From our Special Correspondent.*)

Congress and Public Health.—Mr. Beach, of New York, by direction of the Committee on Public Health, on April 1st, reported back with an amendment the following resolutions on the adulteration of food, drink, and medicine:

"*Resolved*, That the Committee on Public Health be authorized and directed to inquire into the truth of said alleged abuse, and to report to this House the result of their investigation at as early a day as practicable; and if it shall be shown that such practices exist, then to suggest or recommend in their report what further legislation, if any, is necessary to correct the wrong. And that they may more effectively do their work, be it further

"*Resolved*, That said Committee be, and they are hereby, empowered to send for persons and papers, and to employ such chemical and medical experts as they may deem necessary to carry out the aim, end, and object in view."

The amendment of the Committee was as follows:

"Strike out the words 'and to employ such chemical and medical experts.'"

The resolution gave rise to a prolonged discussion, in which Mr. Brown, of Indiana, Mr. Cox, of New York, and Mr. Reagan, of Texas, opposed the resolution as unnecessary legislation, while Messrs. Beach and Parker, of New York, and Mr. Wait, of Connecticut, favored immediate and favorable action. A motion to further amend the resolution, by limiting the expenditure for such investigation to $1000, was made by Mr. Kasson, of Iowa. Mr. Cox moved to lay the resolution on the table, which was lost. Mr. Beach then moved the previous question, and accepted the amendment of Mr. Kasson. Both amendments were agreed to and the question upon adopting the resolution as amended was taken. No quorum voted. A lively discussion followed, and Mr. Cox moved to recommit the resolution to the Committee on Public Health. Mr. Beach, Chairman of that Committee, moved to lay the motion to recommit on the table. A vote was taken and the motion lost. The question then recurred upon the motion to recommit, which was agreed to by a vote of 117 to 116.

A Home for Disabled Sailors.—Mr. Finnerty, of Illinois, introduced, in the House, a bill for the purchase of ground at Chicago for a home for disabled and indigent sailors of the navy and merchant marine, which was read a first and second time, referred to the Committee on Naval Affairs, and ordered printed.

The National Board of Health.—Mr. Frye, of Maine, presented in the Senate the petition of the New York Committee for the Prevention of State Regulation of Vice, praying that the jurisdiction and powers of the National Board of Health be specifically defined and limited. Referred to the Committee on Epidemic Diseases.

Quarantine Station at Cape Charles.—Mr. Libbey, of Virginia, on March 29, presented in the House resolutions adopted by the Council of Norfolk, Va., and by the merchants and manufacturers of Norfolk, and the Norfolk and Portsmouth Cotton Exchange, recommending the establishment of a national quarantine station at Fisherman's Inlet, Cape Charles, which were severally referred to the Select Committee on the Public Health.

The Secretary of the Treasury received, through the mayor of Portsmouth, Va., on the 4th inst., a set of resolutions adopted by the Common Council of Portsmouth, recommending the reëstablishment of the quarantine station which was in operation last year at Fisherman's Inlet. Surgeon-General Hamilton also received a copy of the above-mentioned resolutions.

Medicinal Plants.—Mr. Morse, of Massachusetts, presented, in the House, the petition of the Massachusetts Pharmaceutical Association asking for an appropriation for the introduction of foreign medical plants, and for the protection of domestic medical plants.

Not Foot and Mouth Disease.—Dr. Salmon, Veterinarian of the Department of Agriculture, has returned to Washington from Kansas and other States, where, by direction of Commissioner Loring, he has been investigating the alleged outbreak of foot and mouth disease, and has made a preliminary report to the Commissioner of his investigations. In conclusion, Dr. Salmon declares that the recent outbreak is attributable to local conditions, and that no single symptom of contagious foot and mouth disease has been or can be shown.

DR. ALFRED STILLÉ.—It is stated that in the early part of next month, immediately after the close of the winter session, Dr. Alfred Stillé will tender his resignation as Professor of the Theory and Practice of Medicine in the University of Pennsylvania, after an incumbency of twenty years.

Five years ago Dr. Stillé offered his resignation, but at the request of the Board of Trustees he withdrew it.

It is understood that Dr. Pepper will be elected to the chair vacated by Prof. Stillé.

A life-size portrait of Prof. Stillé has been painted by Waugh, by order of the students of the Medical Department, and will be presented to the University at the ensuing commencement.

NEW YORK NEUROLOGICAL SOCIETY.—At the Annual Meeting of this Society, held on the 5th inst., the following officers were elected for the ensuing year:

President.—William J. Morton, M.D.

Vice-Presidents.—Drs. C. L. Dana and G. W. Jacoby.

Recording Secretary.—Dr. E. C. Wendt.

Corresponding Secretary.—Dr. W. M. Leszynsky.

Treasurer.—Dr. E. C. Harwood.

Councillors.—Drs. E. C. Seguin, L. Weber, T. A. McBride, W. R. Birdsall, and Graeme M. Hammond.

GARFIELD MEMORIAL HOSPITAL.—In the notice of this hospital in our last issue, the name of Dr. J. Ford Thompson, as one of the attending surgeons, was accidentally omitted.

A MARINE HOSPITAL FOR NEW YORK.—The Committee on Commerce of the House has reported favorably the bill to provide for the purchase of the Seamen's Retreat, in Middletown, N. Y., at a cost not exceeding $280,000, and the use of the same for the purposes of a marine hospital at the port of New York. In making this report the Committee says its enactment would do no more than put the port of New York on an equal footing with respect to marine-hospital service with ports of less commercial importance. It says that New York is the only seaport city in the United States with a large population which has not been provided by the General Government with a marine hospital.

THE DWIGHT LIFE INSURANCE CASE.—A telegram from Norwich, N. Y., states that on the 2d inst. the case of exceptions of Dwight against the Germania Life Insurance Company, was settled before Judge Follett, preparatory to revision in the General Term. On the next day the Ætna Life Insurance Company, of Hartford, which was a member of the pool to resist payment of the $256,000 insurance on Colonel Dwight's life, paid his policy in that company, amounting to $10,000. This is the third company which has paid its obligations.

THE MEDICAL ASSOCIATION OF GEORGIA will hold its annual meeting at Macon, on the 16th of April.

ILLINOIS STATE BOARD OF HEALTH.—The regular quarterly meeting of the Illinois State Board of Health will be held at the Grand Pacific Hotel in Chicago, beginning Thursday, April 17.

At this session candidates for certificates will be examined, both non-graduates, who must undergo an examination upon their preliminary education, as well as in the usual branches of medical study, and also graduates of colleges which have not fully complied with the schedule of minimum of requirements adopted by the Board in 1880, and in force from and after the session of 1882–1883.

ALBANY MEDICAL COLLEGE.—At the annual commencement, held March 5th, the degree of M.D. was conferred on forty-three candidates.

MEMPHIS HOSPITAL MEDICAL COLLEGE.—This institution held its fourth annual commencement on the 29th of February, and the degree of M.D. was conferred on twenty-three candidates.

THE SOUTHERN MEDICAL COLLEGE held its commencement exercises at Atlanta on February 25th, and thirty candidates received the degree of M.D.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending March 29th indicate that inflammation of the brain and pneumonia have increased, and that remittent fever, inflammation of the bowels, tonsillitis, and bronchitis have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending March 29th, and since, at ten places, scarlet fever at twenty-four places, and measles at eleven places.

OBITUARY RECORD.—DR. HALL DAVIS, of London, died on March 19th. He has long been well known as an obstetrician, and is the author of several contributions to the *Transactions of the Obstetrical Society*, of which he was an Honorary Fellow and formerly President.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 1 TO APRIL 7, 1884.

BAILY, ELISHA I., *Colonel and Surgeon.*—Ordered to report to the Commanding General Division of the Pacific for duty as Medical Director of that Division and of the Department of California. —*Par. 4, S. O. 78, A. G. O.*, April 4, 1884.

SUTHERLAND, CHARLES, *Colonel and Surgeon.*—To be relieved from duty in Division of the Pacific, and to report to the Commanding General Division of the Atlantic, for duty as Medical Director of that Division and of the Department of the East. —*Par. 4, S. O. 78, A. G. O.*, April 4, 1884.

WOODHULL, ALFRED A., *Major and Surgeon.*—Granted leave of absence for twenty-two days, to take effect about April 6, 1884. —*Par. 13, S. O. 72, A. G. O.*, March 28, 1884.

STERNBERG, GEORGE M., *Major and Surgeon.*—Ordered to be relieved from duty in Department of California, and to report to Commanding General Department of the East for assignment to duty.

MOSELY, EDWARD B., *Captain and Assistant Surgeon.*—Ordered to be relieved from duty in Department of the East, and to report to the Commanding General Department of the Columbia, for assignment to duty.—*Par. 4, S. O. 78, A. G. O.*, April 4, 1884.

WILCOX, TIMOTHY E., *Captain and Assistant Surgeon.*—Ordered to be relieved from duty in Department of the Columbia, and to report to the Commanding General Department of the East for assignment to duty.—*Par. 4, S. O. 78, A. G. O.*, April 4, 1884.

WHITE, ROBERT H., *Captain and Assistant Surgeon.*—To be relieved from duty at U. S. Military Academy, West Point, N. Y., August 28, 1884.—*Par. 7, S. O. 74, A. G. O.*, March 31, 1884.

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

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ORIGINAL LECTURES.

AN ADDRESS

DELIVERED TO THE MEDICAL CLASSES OF THE UNIVERSITY OF PENNSYLVANIA,

ON WITHDRAWING FROM HIS CHAIR, APRIL 10, 1884,

BY ALFRED STILLÉ, M.D., LL.D.,

PROFESSOR OF THE THEORY AND PRACTICE OF MEDICINE.

GENTLEMEN: The lectures which, twenty years ago, I began in the University, I have now concluded. I have contributed, according to my ability, to the store of useful knowledge from which your predecessors, for more than a century, imbibed professional instruction. Everyone who, in his turn, comes to occupy a position such as I have had the honor to hold, is ambitious of deepening, and widening, and purifying the stream of knowledge, and, for such little time as the rush of events permits, of being held in remembrance as one who did not labor altogether in vain.

In entering upon the duties of this Chair, I was not altogether in my novitiate as a teacher; yet I felt that my task was one of exceptional responsibility, and to the very last this impression, instead of becoming lighter by familiarity, has grown more serious and profound. I have never for a moment been able to put away from me the impression that according as I discharged or failed to discharge my duties conscientiously would be my responsibility for the lives and health of those who were to become the patients of my pupils.

But no man lives up to his ideal. The further he advances in learning and experience, the higher will his ideal rise, and at the end of his career it will appear to him, more than ever, unattainable; and it must be so, for knowledge is infinite.

The one principle that has shaped and governed my instruction was to oppose fact to theory; to build up the walls of your education securely with the one hand, and with the other to defend you against the intrusion of hypothesis and unsubstantial theories, the most dangerous of all your enemies, because the most seductive to the young and ardent mind. I have often thought that the progress of knowledge would be more rapid, as well as more steady, if it were only possible to divide the speculative men from the practical, leaving a free field to the former wherein to manœuvre their phantom squadrons, and to the latter an equal opportunity of cultivating in peace the fruitful furrows ploughed by observation and experience. But such an expedient would be opposed to the practice of mankind, which also has the sanction of divine wisdom, to let the wheat and the tares grow together until each has brought forth its proper fruit, when the one can be garnered, and the other destroyed.

Well convinced that time never fails to do justice upon the false and fanciful, I have forborne to make that vivisection of them without anæsthetics, which reason and instinct suggested, and have devoted whatever knowledge and skill I possessed to the simple, if difficult, task of knowing and curing diseases. I have striven, in season, and perhaps out of season, to impress upon you that medicine is, first of all, an art, but an art that can only be successfully practised when the physician is able to recognize the individual diseases he must meet with in practice, and distinguish from one another those which are similar in appearance, but unlike in nature. This subject I would fain have had time and opportunity to illustrate by a detailed study of the history of medicine, and by showing you what no medical historian has yet elaborated, the pregnant truth that the real links of the historical chain are, above all, the practical men, the foundation of whose teaching was clinical; and that theorists in every age have been stumbling-blocks in the road of progress, or else the chains, the fetters, and the gags of those who, under proper guidance, would have worked for nature and for truth.

I have endeavored to keep before myself and before you, the great truths that in medicine whatever is not subsidiary to diagnosis and therapeutics is unessential if not superfluous; that it is quite as necessary for the physician to know when to abstain from the use of medicine as it is for him to prescribe when medication is necessary; that he must, as far as possible, see the end of a disease from its beginning; that he must never forget that medical art has a far higher range and aim than the prescription of drugs or even of food and hygienic means, and that when neither of these avails to ward off the fatal ending, it is still no small portion of his art to rid his patient's path of thorns if he cannot make it bloom with roses. Such knowledge not only quickens the patient's faith but confirms the physician's also, because he knows the limits of his power, and is neither deceived himself nor deceives others. The issues of life and death are not, indeed, in human hands, yet the physician, with his finite means, can sometimes render harmless the thunderbolt that threatens destruction. The power that permits death and the manifold causes that produce it has also given to man his love of knowledge and the intelligence to apply it for overcoming evil, and he has likewise implanted in us a conscience that will approve or condemn us as we use those gifts for the welfare or the hurt of our fellow-men. Sooner or later every one of us must sit in judgment on the conduct of his life. We cannot escape self-questioning. We must ask ourselves whether the talents we have received as natural gifts or developed by labor, have grown and multiplied as they should have done, or whether, at the end of our career, we have nothing more to show than the original handful of seed, grown hard and dry, and perhaps mouldy in our unprofitable possession.

To produce a harvest of knowledge that shall be worth gathering, demands at least as much labor and vigilance as the crops that minister to our material wants. In the earliest springtime of life the soil must be thoroughly

prepared for the seed, and the seed itself must be of the best quality. Education should begin from the very cradle, and in early life the habit of observation acquired which is of inestimable value in every pursuit. Then, if the child be destined for a professional life he should be systematically trained, and more and more strictly as he grows older, towards the field of knowledge he is destined to occupy. Thenceforth he must begin to fill his own treasure-house with the fruits of study and observation, not trusting wholly to his memory, which is unfaithful, but recording, from time to time, if not day by day, all that is worth preserving. He should never forget that medicine, like all knowledge, has a past as well as a present and a future, and that in that past is the indispensable soil out of which improvement must grow. He should remember, too, that however closely related the several branches of medicine are to one another, each one in its turn is best learned by an almost exclusive devotion to it for a time, and when his barns are filled to bursting with his harvest, let him not forget that the grain has still to be winnowed. His fan must be in his hand to purge the threshing-floor of the dead, the unessential, the hypothetical, the fanciful, and, above all, the false. In all things truth must be his object, his inspiration, and his guide.

You have fallen upon a time in which medical knowledge far exceeds in amount and variety that of any previous era. The measure of it is most readily apprehended when we consider the extent of the medical literature of the day, and, in some respects, its superiority over that of any previous era. It is perhaps as distinctly indicated by the improvement of medical periodical literature as by any other sign. That it still leaves much to be desired is very true; but in every direction indications may be found that it is gaining in seriousness, dignity, solidity, and energy. Hardly less noticeable is the tendency, at least, of most of our medical colleges to recognize the need of a higher standard of education, while in a few, including the University, actual progress has been made by lengthening the period of professional training, and enlarging and perfecting its laboratories and clinical work. All of this is well, is praiseworthy, is hopeful. But it is not all that is necessary. One thing, at least, is lacking in nearly all of our colleges, and in the few where it exists it is in a formal and merely embryonic state, a promise rather than an achievement. I allude to the preliminary or entrance examination. This was one of the watch-words of the American Medical Association at its organization in 1848. In that body, and in the local medical societies that have concerned themselves with medical education, it has yearly been echoed and reëchoed until in the ears of many it has become a mere phrase without practical meaning. And yet, in truth, it lies at the foundation of all radical improvement in our educational system, for it needs no argument to prove that the merely medical education of otherwise uneducated young men will never elevate or dignify the medical profession.

If the nature of medical science and art is considered, it becomes plain that to embrace them a greater variety of knowledge, and a greater skill in the exercise of the mental faculties, are required than is demanded by any other professional pursuit whatever. Hence it is that in older countries than our own, where education is better understood and more easily managed, because managed by more competent men than with us, the laws prevent all unqualified persons from becoming members of the medical and, indeed, of every liberal profession. It is there universally understood that no one can be qualified, even to enter upon the study of medicine, unless he has been trained in the classics, in mathematics, and in natural science. There it is taken for granted that no one destitute of classical education can appreciate either the spirit of modern medical literature, in the best of which the wisdom of the ancient world survives, or the value of doctrines, descriptions, precepts, and practices which, though apparently of modern origin, take their rise in the remotest periods of medicine; or the significance of words now in daily use which reveal only to the etymologist their essential and recondite meaning. In a word, it is taken for granted that no man can become a physician in the best sense of the word unless he is also a scholar, that the training of the mind which makes him one, also best enables him to form clear notions of things as well as thoughts, and to arrange his ideas in so orderly a manner that, whether for his own use or for the instruction of others, he will always find his knowledge ready and efficient. But that is a part only of the value of a liberal education to a physician. Hardly less valuable—and if estimated not by its material results, but by the mental and moral satisfaction it ensures—not less, but much more, valuable is it to the physician, as it is to every other man whose pursuits are as absorbing, as exacting, and as exhausting—is the culture of some extra-professional field of knowledge. In the hours of rest he may snatch during his busiest life, and in the years of repose that he looks forward to in the waning of his life's evening, he will then never be without the recreation of reading that refreshes his weariness more than idleness, and quickens his faculties by varying their exercise. Every young physician must, indeed, begin his career chiefly among the vulgar and illiterate, but in due time, and all the sooner the better he is prepared for it, he will enter the circle of the intelligent, the educated, and the refined, and then, if he is a mere dispenser of drugs or brandisher of instruments, he will fail to gain their esteem as a man, even while he commands their employment of him as a helper in their emergencies. But if he is a man of liberal education, of cultivated intelligence and taste, and has that large humanity which makes him feel instinctively that his patients are not diseases or injuries, but suffering human beings who may be influenced by psychical as well as by physical agencies, he will learn that mental medicine is often more potent than drugs, and that if in his therapeutics he has not included this agency, he lacks one-half of the power he ought to possess.

Some one may object, perhaps, that the picture I have drawn is an ideal one, and that young men who are educated in medicine cannot often be expected to reach it. Nevertheless, a true ambition would be degraded if it did not set before itself the highest possible attainment, if it did not feel dissatisfied with any system that fenced in its strivings and dwarfed its ideals. But true ambition is rational and not quixotic. It feels that its discontent with the present and its striving towards a better time to come must be subordinated to the laws that govern development in all living things.

When an institution, be it political, social, or educational, is discovered to be no longer adapted to the actual condition of a people, it can be safely modified only in accordance with the peculiarities of the people for which it was established. All history teaches the folly of supplanting it by another institution which was not made for the place or time, but was constructed according to some abstract notion of its usefulness and fitness. It is like ready-made clothing, which is suitable for the average man only, and can never perfectly fit any individual man. The mental qualities of young men are as various and unequal as their complexion, their stature, or their weight; and it can as little be expected that the same system of education will be adapted equally well to all, as that the uniforms from an army sutler's stock will fit becomingly or comfortably every soldier who is to wear them. And yet, practically, such uniforms *must* be worn, and as we very well know their defects do not prevent their wearers from bravely fighting and winning battles. In like manner the systematic education of professional men is no less necessary, and although it suits no one perfectly, it suits all well enough in the battle of life. The individual's education in common can never be the best; but it can always be improved, always made to suit a progressively increasing number. In proportion as the students who come to be clothed intellectually attain to a greater elevation and quality of mental development, the methods of education should be expanded to fit their intellectual height and breadth. So shall they no longer present the sad spectacle of manhood in the jacket and pinafore of childhood, or the ludicrous one of childhood tottering and stumbling in the garments of maturity.

Meanwhile, let us not expect nor attempt abrupt changes. The defect of all reformers is impatience. They insist that, because a principle is intrinsically true, it should forthwith be put into practice; that because a practice is right it should be enforced upon every one. It is not in this manner that good ends are reached, either by nature or by mankind. To take the most familiar illustration: religious doctrines and precepts have never yet leavened the whole of humanity, and crime and its punishments abound in nations that claim to be governed by the highest moral principles. The perfect law of right is opposed by passive ignorance, and moral progress by the tendency to wrong. Only inexperienced and impractical dreamers expect good to flow spontaneously and immediately from evil, or to see a defective system that has the vantage-ground of age swept away as soon as one that is esteemed better is ready to take its place. Such are apt to be the mistakes of those who take a microscopic view of things, whose vision is bounded by the narrow circle of personal relations and interests, and who forget that the questions to be solved are as wide as the whole profession of medicine, and to the end of time will involve dissident if not antagonistic opinions. But if it is impossible, upon a very close view of a subject, to see all of its parts and their relations to each other, it is equally impossible to do so if we take a standpoint above the clouds, where, if we have a wider field of vision, it is a very indistinct one, and where, if the atmosphere is clear, it is also so cold as to freeze humanity out of medicine. It behooves us to remember that medicine is, above all else, humane as well as human; that its beginning, middle, and end is to relieve suffering, and that whatever is outside of this may indeed be science of some sort, but certainly is not medicine.

In one form or another, the doctrine has come down to us from a remote period, *Ars medica tota est in observationibus*—the art of medicine is founded on experience alone. It is the business of science to explain what experience has established; but it is not the primary business of science to observe and connote facts. That is the function of rational empiricism. The application of the results of observation to definite ends constitutes an art. The explanation of those results, *i. e.*, the act of bringing them under some general law or principle, is a function of science. But whether science explains or fails to explain the art, the art is neither more nor less perfect as an art, any more than the eye was less perfect than now in its power of seeing before the structure of the organ or the laws of optics were discovered. Art is inherent in the nature of things and in man's mental constitution. Science is an artificial method designed to generalize the results of observation and experience. There was an art of painting and of sculpture before the laws of proportion and color were understood; and it need hardly be added that if Michael Angelo and Titian rivalled Phidias and Appelles, it was not because the former were better acquainted with the laws of proportion and harmony in form and color. There was an art of rhetoric before the laws of language were discovered; an art, and a science too, of chemistry before the atomic theory was invented; and there was a culinary art, and is at this day, which in its perfection makes ridiculous the laws that chemistry and physiology have promulgated for its government. There is also an art of medicine which no less completely eludes, or as flatly contradicts science, by means of empirical facts, and gives the palm to sagacity and common sense over laws formulated by experiment, and proclaimed with the conviction and imposing solemnity of a new delivery of the decalogue.

I do not make this attempt to show you whereabouts lie the quicksands that may engulf your most cherished hopes, and the rocks upon which they may be dashed, without knowing how prone the youthful mind is to be led astray by false lights, and how confident it feels of passing safely across the dangerous period of life. Unfortunately, the danger is either not seen at all, or is not regarded as danger, and the self-deceived physician, unconscious of his error, becomes an example, instead of a warning. But my object is not so much to convince your judgment, as to lead you to pursue studies that will lessen the risk of your falling into error. My plea for medical history is to induce you to examine it for yourself, being persuaded that you will learn from it that the unity and continuity of medical art have been maintained, not by theories of disease and of medicinal action, that have chased one another like jack-o'-lanterns along the road of time, but by the facts of observation honestly and laboriously accumulated from the beginning until now. This was the theme of a lecture that I delivered nearly forty years ago, and all these years of experience and study have so confirmed me in its truth that now, in this, my last public utterance, I cannot refrain from handing it over to you as the sum and substance of my teaching and the best legacy I can bequeath to all my pupils.

Nearly half a century ago, I was about to emerge, as some of you are now, from the chrysalis state of undergraduate. Surely, no butterfly sees the world brighter before it than this fledgling of medicine. How radiant and fearless is the spirit of youth when we stand upon the hill-top of hope, and seem to embrace the universe in our horizon. The freshness of the morning is in our limbs; the heart's fountain gives out only pure waters; our eyes glow as we turn eagerly to the rising sun, and "From mount to mount through Cloudland, gorgeous land!" we behold the peaks that we feel predestined to surmount. Upon the mist that veils the sun from us (and we thrill as we behold it) is projected a living picture of ourselves, but of gigantic proportions; and as we salute in it the prophetic image of our future greatness, it seems to return the salutation with the "All hail! that shall be king hereafter!" . . . . But the sun has risen to high noon; it has long ago dispelled the mist and its delusive phantoms; we have been wayfarers on the highway of life, foot-sore and weary, and perhaps soiled by its dust; possibly we may have been carried forwards in luxurious chariots; but never, *never*, we may be sure, have we gained possession of that estate in Cloudland which to our youthful eyes seemed so sure an inheritance. Even if we seized the golden apples, and for their possession overcame as fearful foes as the dragons that watched the garden of the Hesperides, too often we have left behind us the appetite that made us covet them, and they seem to turn to ashes on our lips.

Professional life, like every other, is a life of mingled joy and sorrow, of success and failure, of rewards and disappointments. The vastness and variety of the numerous departments of medicine, the nobleness and beneficence of its aims, fill the student who is worthy to pursue it, with perpetual admiration; and, as he masters each new field of research, inspires him with an enthusiasm which hardly any other study is so well fitted to excite. His confidence increases as he proceeds, and he is so sure of success that he can scarcely repress a feeling of pity not unmixed with contempt for the veterans who have grown gray in the practice of their art, and who have, perhaps, little reward to show for their long and faithful service but honorable scars and a premature old age, and who often lack even that retiring pension granted by their country to soldiers whose ambition and business it is to destroy life and not to save it. The proverb tells us that "the first step is always the most difficult," but the young physician takes that step with braced sinews and a heart swelling with hope. It is the steps that follow which cost, when his disillusion has begun, and when he perceives that the theories which promised to form so sure a foundation for his practice have played him false. "Like little wanton boys that swim on bladders—but far beyond his depth," his "high-blown pride" at length breaks under him, and leaves him "weary and old with service, to the mercy of a rude stream that must forever hide him." Of all the splendid apparatus of science on which he staked his hopes, none does its work any longer, nor produces to good purpose, save only that which is moved by powers he had learned almost to despise, the authority of experience and the genius of common sense.

But, you will object, although the young cannot expect to possess the wisdom, the caution, the balanced judgment of the old, are their faith, hope, and enthusiasm to count for nothing? By no means. Wisdom is the fruit of a prudent man's experience, but faith and its attendant sentiments spring up in the virgin soul of youth, and shame on the hand that would blight or crush them! But it is none the less true that they who have learned life's lesson are bound to save from self-deception those who have it still to learn, and as far as possible warn them of the errors and pitfalls in which so many have seen their hopes perish. Surely the voyage of life will be neither less secure nor less pleasant if made with a chart that marks the places where storms occur, or shoals lie in wait for the unwary, and which shows at the end no El Dorado of the imagination but the homely haven where peace and honor dwell. Of all who hear me now, not one whose life is spared need fail of that attainment. Only two things are essential, to live uprightly and to be wisely industrious. Whoever does these things need not fear the future. If he become successful, eminent, famous, to them he must owe his success. If he remain poor, humble, and obscure, his clear conscience will stand him instead of much riches, and perhaps make his home all the sweeter for its homely virtues. These thoughts remind me that the physician belongs to a much larger family than is sheltered by the domestic roof, and to which he is bound by the strong, yet tender ties created not only by a common training, but by the constant and reciprocal interests of professional life. It is sometimes asked why the medical profession alone should require a code of ethics for the regulation of its conduct? The question is not without the flavor of a sneer, and implies that there must be something peculiarly perverting in the science of medicine, or corrupting in its practice which renders necessary so formal a statement of its moral duties. Let us consider the matter.

The moral government of mankind has never been entrusted to merely abstract propositions. The most ancient of moral codes, the Decalogue, maintains its authority unbroken by thousands of years. Their sum and substance are embodied in the two simple precepts of the founder of Christianity, and yet the former was expounded by Moses and his successors into an elaborate system of law, was adopted into Christianity, and thence by all the civilized nations of the world, until it has interfused the legislation under which we live at the present day, and not the legislation only but the usages of society in all ages. Wherever law reigned men who were similarly employed were drawn together into guilds and societies for the common benefit of their members, and in each statutes were enacted which enforced compliance with them by heavy penalties. Even among trades ethical rules existed, and when the learned professions were gathered into their respective colleges or faculties the privileges and rights of the members were counterbalanced by laws for the regulation of their conduct. The clergy alone were destitute of any specific ethical code, because they were held to be especially under the divine law from which all other codes emanated, and yet every religious community, of whatever denomination, possessed, and still possesses, special rules of conduct by which its members must be governed. The necessity of ethical codes arises from the fact every-

where and always recognized, that either through lack of instruction, or through a defective or perverted moral sense, or through mere heedlessness, men do fail more or less to conform their conduct to justice and equity.

If men were habitually virtuous and just, unselfish and generous, if they could always see themselves as others see them, and judge their own motives and actions as strictly as they judge of other men's, then, indeed, there would be but little need for ethical or religious laws, for "they that are whole need not a physician." But law is nature's medicine for nature's defects and errors. Whoever imagines that he needs it not, that he possesses an inner light that will prevent his feet from straying into the paths of error and enable him to decide justly in every conjuncture of life, is more to be wondered at for his boldness than admired for his modesty, for he lifts himself into a judgment seat where even Solomon did not dare to sit.

I have said that the relations of a physician to his brethren and to society differ widely from those of other professional men, and, indeed, of all other men whatever. The emulation and rivalry of clergymen and lawyers are, for the most part, displayed before the eyes of the world, so that there is no special opportunity for an evil-minded man of either profession to back-bite or malign his brethren. Moreover, he knows that if he offends in this manner, the court may affix a stigma to his name, or the religious body, or the superior, upon whom he depends, may ruin him by an ecclesiastical condemnation. In the medical profession there is no tribunal which is under such imperative obligations to act, or enforce its decisions so rigidly. Hence, one necessity of a code of ethics. But another, already implied, is even more cogent. The physician is the only human being who is habitually admitted behind the scenes of life's stage. He is the depository of secrets to which even a confessor's ear is a stranger—secrets on which station, honor, and life itself may depend; and, even when not so burdened, he is more than anyone else the confidant and friend of those whose diseases he has healed. He is often the guardian of families that put their trust in him. Is it any wonder, therefore, that he should be jealous of the intrusion of a rival, or even of a friend, upon his preserves, and that, the evil of human nature aiding, the rival should endeavor to supplant him, and that thereout coldness, estrangement, animosity, evil speaking, and ill treatment should arise? Or is it surprising that the very confidential relations of a physician to his patient should expose him to the temptation to do wrong, and that he should, therefore, be warned by written laws of the danger he incurs?

These are the grounds out of which the ethical principles of the British and the code of the American medical profession grew, and which inspired the works of French and German writers on the same subject. They are the principles of honor, morality, and whatever is best in modern civilization, and, therefore, should be had in respect by all. It is a sign of decadence in the American social and medical systems that such laws are treated as obsolete or superfluous, and sneered at as fit only for children in leading-strings. Let me, as the parting counsel of one not without experience of life, adjure you to hold fast to this rock of safety, and, far from aiding to abrogate it, to strengthen and perpetuate it by every means in your power.

Impatience of authority and restraint has, perhaps, a deeper source than I have yet indicated. Its most conspicuous and violent outbreak occurred in France a century ago, and for a time covered the country with ruins steeped in blood. In our own day, the rebellion against law, if less sanguinary and destructive, is not less vehement, and is far more extended. Its name is Nihilism, and its creed is the denial of whatever has been known as religion, a hatred of all the virtues that are the fruit of faith, and a contempt of the obligations imposed by law. It tends to rob man of trust in whatever has been loved or respected in religion, in law, in the love and authority of parents, in the affection and obedience of children, in virtue, in duty, in honor, and in the established order of things that links the present to the past and to the future, making it the offspring of the one and the parent of the other.

If it were possible for this egoistic materialism to endure and prevail, the winter of humanity would indeed be near at hand, in which all signs of life, all progress and development, all beauty and nobility would be frozen out of it, and mankind would be reduced to a lower moral level than the beasts of the field. A world without faith! A world without love! As easy were it to conceive of a world without light or heat. In such a chaos what would become of all those institutions that have been established, perfected, and reverenced by advancing civilization? Conceive, for a moment, a community where no song of bell nor inward voice called to worship; where justice had become deaf as well as blind, because every man claimed to be a law unto himself; where there was no balm to soothe, no physician to cure, no right of property, no sacredness of person, where, in a word, mankind had lost whatever has hitherto distinguished humanity. If you can imagine such a herd of human beings — for it will no longer be a society or a community—you may behold in it a picture of the one that will assuredly arise if these nihilistic doctrines, this worship of self, this scorn of faith, this contempt of the past and exaltation of the present should prevail.

Let me plead with you to shun these poisonous principles which tend to the destruction of all that has been held noblest and best by the wise and good of every age; principles which put farther asunder the nations, communities, and individuals whom the physical improvements of the age should bind together and at last fuse into one. Faith is the parent and preserver of all good works. Unbelief, like Saturn, devours its own children. Faith is to man's nature what sunlight is to the world, clothing it with beauty and life; while unbelief is like the moon, in which the sun's rays create neither motion nor color, but fall forever upon its lifeless orb. Without faith, man's ambition is but narrow selfishness, contemptuous of the historic past on which it is compelled to build, and careless of what evil germs it may plant to be developed in the future. The higher a man rises in his humanity, the more clearly does he feel himself to be a link between the past and the future; the more fully recognize that what he has received that also must he transmit, increased, perfected, and consecrated by that spirit of love for humanity without which "good gifts wax poor."

It has again and again been said, of old and in our own day, that the physician's office is a priesthood, a service of the divine for the sake of the human. It does not exist for the discussion of scientific problems, except in so far as they relate to the prevention and cure of disease. Whatever is contrary to this may be science, but it is not medicine, and he who practises medicine in an exclusively scientific spirit very soon divorces his affection from his life's work, and leaves it barren, spiritless, and unsatisfying. No man can become a great physician whose heart is not in his work at least as much as his intellect. It is a work of charity and love, of self-denial and long suffering, and yet, like all work that crushes down the selfishness of the human heart, its rewards are beyond price, and can be understood only by him who receives them. Many of you have heard of the great anatomist Vesalius, and seen the print that illustrates the devout spirit with which he pursued his immortal investigations even under the ban of religious persecution. By such a spirit ought we all to be guided and controlled, never divorcing from science and art the divine sentiment of their brotherhood to one another and to every human being that needs the succor of our skill.

Other subjects there are, besides those I have caused to pass so rapidly before you that I may well fear they will leave but an indistinct impression, subjects hardly less urgent for consideration—but I must hasten to bring this, our last public interview, to a close. Looking back over the score of years which divides the beginning from the end of my professorial career in the University, and comparing the classes of the one period with those of the other, I cannot avoid recognizing the steadily improving culture of the students I have had the pleasure of addressing, and that during the later years of my experience the classes have been much more receptive of knowledge and far better able to appreciate it than their predecessors. In former times, after the examination of certain candidates for the degree, I have felt my spirit sink under the thought that they were to be entrusted with the care of health and life. I did not blame them, I pitied them; but I did blame and utterly condemn the system which introduced such persons into the medical profession. You have lived under a different dispensation; and during the years that it has been established, I have been spared the pain and the shame which were once the heaviest burdens of my office. I have enjoyed the satisfaction of seeing reflected in your faces an intelligent and interested appreciation of what it had become a pleasure to teach. This sympathy with my audience has been the sharpest spur to my endeavors to be worthy both of my subject and of them. I have felt that in emphasizing and reiterating certain views and precepts I was teaching a lesson not to be learned by rote, but that would sink deep and always remain in the retentive minds of my hearers. Never before did I feel so strongly impressed with the dignity as well as the responsibility of the teacher of medicine. And hence it is that, standing now upon the further verge of my professorial career, I can bid it farewell with a cheerful and contented spirit, satisfied that in the future those who may hold this Chair will be still more worthy teachers, and that your successors will be still more accomplished students.

To those who have followed my lectures, I return my heartfelt thanks for their great courtesy and consideration, and, above all, for that interested attention which is the best evidence a teacher can receive that his labor is not in vain. To you, to all who hear me, I offer my most earnest wishes for your success in life, bidding you to love mankind, to love your profession, and, above all, to LOVE TRUTH.

ORIGINAL ARTICLES.

SPASMODIC SWALLOWING, OR RETRACTION OF THE TONGUE.[1]

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My attention was called to this rare accident in the following way. In the latter part of last month, I was attending a young lady for violent idiosyncratic coryza, which presented all the symptoms of hay asthma. According to the history she gave, she has been subject to these attacks for about three years. They are not brought on by the emanations from grasses or flowers, and they are more frequent during the winter than the summer. The more usual exciting causes are foul odors, dust of flour, and ordinary dust, and she said that the same effect had been produced by almost all the local applications used for the relief of the chronic nasal catarrh from which she also suffered. During this present attack, breathing through the nose was much interfered with; there were considerable dyspnœa, especially on lying down, and a sense of constriction over the upper part of the sternum. The dyspnœa was unlike that of asthma, to which she had an inherited predisposition, in being distinctly inspiratory in character, though the expiration was also somewhat embarrassed. Examination of the chest revealed only mucous râles in the bronchi of medium size.

Although these attacks had only troubled her during the past three years, the chronic catarrh, which so generally is one of the strong predisposing causes of idiosyncratic coryza, commenced in her eleventh year, and was first noticed after prolonged exposure to a severe snow-storm. Since that time also she has had two attacks of diphtheria, one of them especially severe, and affecting the nose. The form of the catarrh was hypertrophic.

She was recovering from her attack with more than usual rapidity and ease, and was expecting to resume her ordinary duties the next day, and I was about to commence the treatment of the chronic trouble, when, about 9 P.M. on the 2d inst., I was hastily summoned to her, the messenger stating that she was choking. Putting what seemed to be needed into my satchel, I started off at once, expecting to find her in one of her ordinary attacks of more than usual severity. When I arrived, it was evident from the surroundings, that her attendants had been very much alarmed, though the more urgent symp-

[1] Read before the Baltimore Medical Association, March 24, 1884.

toms had been relieved. The history of the attack was as follows: Shortly after I had left her, early in the afternoon, she began to notice a sensation of numbness on the left side of the tongue, and a sense of trembling in it. The sensation afterwards extended to the other side of the organ. She took no special account of it, but had some difficulty in pronouncing certain words. This, she said, was not very unusual with her, and she attributed it to the fact that she had always been considered a little tongue-tied. In the evening, however, her friend in reading came across the word "biliary," which, not understanding, she tried to explain to her, but found it impossible to pronounce it. Soon after, she felt a great desire to swallow, and suddenly felt her tongue fly back down her throat, so as to prevent her breathing. The spasm was a tonic one, and lasted about half an hour. As she had heard of the accident of the tongue falling back during chloroform inhalation, and had, from nursing and other means, an intelligent idea of medicine, with great presence of mind she seized her tongue, and drew it forward, and found her breathing at once relieved. The moment her hold relaxed, the tongue was again forcibly drawn back. She found some relief in taking very small sips of black coffee, and noticed that pressure behind the rami of the lower jaw helped to lessen the distress. She remained calm and self-possessed, and showed none of the commonly known hysterical symptoms. Every few minutes, I noticed, there would be a convulsive movement of swallowing, and there was considerable pain. I immediately gave her some whiffs of chloroform, which afforded instant change in her sensations, and relieved the spasmodic movements for a time.

Except when the tongue was drawn back there was no interference with respiration, nor was there any acceleration of the breathing, nor of the pulse, which remained regular and of fair strength.

Thirty grains of bromide of potassium every two or three hours were ordered. I remained with her until about midnight, administering more chloroform when the tendency seemed to be returning, and gave directions that, should there be any symptoms of another attack, half a teaspoonful of chloroform be poured upon a wet sponge at the bottom of a small, wide-mouthed jar, from which she was to inhale the fumes. As there was gastric disturbance, calomel in one-tenth grain doses was ordered.

The next morning I found her very weak. She had had two slight returns, which had been controlled by the chloroform, and had slept but little. I continued the bromide, and left a pair of forceps with her for more ready use in case of a recurrence of spasm. The further treatment consisted in iron and quinine, with nervous sedatives and tonics, and good food. After the next evening no symptom of a return appeared. As the attack was going off, she referred the pain also to the soft palate, and the sensation of numbness she had felt in her tongue went off as it had come on, affecting the left side last. This was the only attack she had ever had, and it was described as entirely unlike the spasmodic affection of the air-passages to which she was accustomed. The history of the case and symptoms also exclude any diagnosis, but the one I have given—that it was a case of so-called swallowing of the tongue. It will be noticed that the word she was unable to speak at the commencement of the attack is rich in linguals, "l" and "r" being the emphatic letters. For a fortnight after this there was great debility, which gradually yielded to treatment.

I have entered thus minutely into the history of the case, because of its extreme rarity. Dr. Ingalls, of Chicago, reported a case to the American Laryngological Society in 1880.[1] He said that he had heard of another instance from non-professional sources, but knew of no other case of the kind. The other members of the Society, being thus challenged, reported no similar case. Dr. J. Solis Cohen[2] merely remarked that the name "Swallowing of the Tongue," was an incorrect one, and that he had had a patient who complained of the tongue flapping up against the roof of the mouth, who was cured by strong brandy. It is fair, therefore, to assume that none of the distinguished gentlemen then present had met with a similar case.

Dr. Ingalls's patient was an extremely hysterical person. Her attack had been preceded by hysterical convulsions. She was improving when, after eating some soup, there was an eructation of gas followed by suffocation. The doctor was able clearly to establish the diagnosis, as I have been, and, finally, during the last attack the impending suffocation was prevented by pulling the tongue forward with forceps. General treatment was resorted to. After looking through a large amount of literature on the subject, as well as many of the current periodicals, I have not met with any similar case on record as far as concerns the adult.[3]

In infants and young children the case is different. In them the tongue is a much more dangerous organ. According to Hennig,[4] who enters pretty thoroughly into the subject, especially the more recent literature, Petit, in 1742, was the first to describe the accident. His first case was fatal; but in his subsequent experience he was able to prevent death by mechanical means, and devised a

[1] Archives of Laryngology, N. Y., 1881, ii. pp. 134, 136. Also Ingalls, Diseases of the Chest, Throat, etc., N. Y., 1881.

[2] Archiv. of Laryng., 1881, p. 181. Dr. Edwin Morris, F.R.C.S., (British Medical Journal, August 31, 1872, p. 242) reports a case of dislocation of lower jaw, during sleep, through sucking of the tongue in a young lady. Spasm of the tongue, affecting the protrusors, is more frequent. See THE MEDICAL NEWS (Phila.), July 7, 1883, p. 8. Medical Record (N. Y.), December 8, 1883, p. 625. Rhein, Westphal Jahrb. f. Med. and Chir., Ham., 1826, xi. St. 2, p. 34. An article, Ueber Idiopathischen Zungen-krampf, O. Berger, Neurol. Centralb., Leipzig, 1882, i. 49–52, was mentioned in the Card Catalogue of the Library of the Surgeon-General's Office, Washington, but was out of the Library.

[3] C. H. Breidenstein, Krank. der Zunge (Neuest. Samml. der Auserlesenste und Neueste Abhandlungen f. Wundärzte, 5 St., pp. 258–286, Leipzig, 1792) mentions the accident, but records no case. In the discussion which followed the reading of this paper, Prof. Ashby spoke of having seen a report of a case somewhat like this, by Dr. Wood, editor of the North Carolina Medical Journal, about eighteen months since.

[4] Ueber Sogenanntes Verschlucken der Zunge, von C. Hennig, Leipzig, Jahrb. f. Kinderheilk., Leipzig, 1877, p. 299. An abstract of this is given in the American Journal of Obstetrics, January, 1878, p. 208.

bandage for holding the organ in place. I found this bandage described by Herr Dr. Stammer[1] as very clumsy. Petit refers his cases to the too deep cutting of the frenum in tongue-tie, or to congenital deficiency of the frenum. This cause is also given by Dr. Veh, of Moscow, as one not infrequently leading to the accident in Russia, as also by Dr. Stammer in his case, recorded by Dr. A. Dröste.[1]

Another frequent cause is whooping-cough. Hennig, in explaining the *modus operandi* in these cases, states that during the violent expirations the under surface of the tongue in infants who have cut the two lower incisors is wounded by the teeth on both sides of the frenum, giving rise to ulcerations. Afterwards, during a forcible inspiration, the tongue is carried back by suction, and the pain from the ulcerations adding its influence, the tip of the tongue becomes curved upwards and backwards, and may be caught between the palate and the base of the tongue, in which case the ensuing expiration cannot dislodge it, and sudden death is the result. This was the case in two infants in neither of whom had there been any cutting of the frenum. Another instance is given by Dr. Seydeler[2] of a fourteen-day old infant who, on being given for the first time a few drops of medicine from a spoon, not knowing what to do under the unusual circumstances, swallowed its tongue, and was only saved from impending death by the doctor drawing the tongue forward. In this case the tip was not turned upward.

The tongue gives trouble also in the newly born during attacks of coryza.[3] The infant, in sleep, breathes through the nose almost exclusively, while the tongue lies close against the soft palate. In coryza it cannot do this, and, especially if it be lying on its back, the tongue is apt to remain in its usual position, and to lie even more firmly fixed against the soft palate. Hence arise dangerous suffocative attacks. That this is the cause of them is shown by the fact that changing the position of the child diminishes the frequency of the attacks, as well as by the relief afforded by pulling forward the tongue. It is not necessary to refer to similar accidents in chloroform inhalations, or to the danger of it after operations on the lower jaw.

It will be seen that in their causation and history there is very little in common between the so-called swallowing of the tongue in children and in the case of the lady I have just reported, or the one reported by Prof. Ingalls. In children, with, perhaps, the exception of the infant reported by Dr. Seydeler, the cause is simply mechanical, the tongue either falls back, as it does in chloroform narcosis and after operations on the lower jaw, or it is drawn back by suction. In the adult, the affection is clearly spasmodic, and has nothing to do with the position of the patient. Prof. Ingalls rightly considered the spasm in his case to be due to hysteria, and this may be the true explanation of my case also, although there was no previous history of hysteria, or any other hysterical symptom during the attack. It is, perhaps, more probable that it was due to the same reflex excitation in the nose that was almost certainly the cause of the asthmatic attacks. Another possible exciting cause was the gastric irritation which was present in her case, as well as in that reported by Dr. Ingalls. The prolonged debility which followed the attack might point to a more serious origin than reflex action (for days the mere walking across the room would weary her), but a careful study of the symptoms and history of the case seems to exclude a central origin, and after her previous attacks of idiosyncratic coryza, her strength has returned but slowly. In the present state of our knowledge, the cause must remain in some doubt. The muscles involved were the hyoglossus and styloglossus especially, though apparently most of the muscles concerned in the first act of deglutition were affected, as the ease gained by pressure behind the rami of the jaw, and the pain referred to the soft palate, after the attack passed off, further indicate.

As the two classes of cases are so distinct, they should be distinguished by different names, and as "Swallowing the Tongue" has been applied so long to the accident when induced by mechanical causes, I would suggest for the affection I have described the name of "Spasmodic Retraction of the Tongue."

As these attacks are of immediate danger to the patient, it is of the utmost importance to fulfil the first indication for treatment, which is to seize the tongue and draw it forcibly forward, and to maintain it in that position. The patient or the attendants should be furnished with forceps and instructed how to use them. After the first attack, the second does not occur without premonitory symptoms, readily recognizable by the patient, who has a most vivid and painful recollection of the preceding seizure. As soon as these symptoms appear—involuntary efforts at swallowing being among the most prominent—inhalations of chloroform or other anæsthetic should be used. With careful directions, it is quite safe to let the attendants administer the chloroform without the physician. The method of dropping a moist sponge, on which half a teaspoonful of chloroform has been poured, into a wide-mouthed jar is a good and safe one, for it is not necessary to inhale much, and the dose may be repeated. This will almost certainly ward off the attack. After the tongue has been drawn out the chloroform may be used while the spasm is still on. Other methods may be employed, such as dashing cold water on the face, etc.

As the affection is accompanied and followed by great nervous prostration, nervous sedatives must soon be followed by nervous stimulants, as asafœtida and valerian. Ferruginous tonics and general supporting treatment are indicated.

[1] Quoted by A. Dröste, Ein Fall vom Sogenannten Verschlucken der Zunge, Wochenschrift f. d. ges. Heilkunde, Berlin, 1834, iii. p. 122.

[2] Quoted by Hennig. Roger (Journ. f. Kinderkrank., 41, 12, 1863) gives a case in which suffocative attacks at night occurred from the tongue falling back against enlarged tonsils during sleep.

[3] Ziemssen, Handb., xii., Anhang, S. 257. See also Schnupfen der Saulinge, Zeitschrift f. ration. Med. (Henle und Pfenfer) 3 Reihe, 23 Band, 1865, S. 227. Bouchut, Handb. der Kinderkrank., übersetzt von Bischoff, Würzburg, 1862, was referred to, but I could not procure it. See also Cohen, Diseases of the Throat, New York, 1880, p. 628.

COMPLETE ABSENCE OF VAGINA, WITH ATRESIA OF THE UTERUS.

By J. C. REEVE, M.D.,
of Dayton, Ohio.

Cases of the class to which this one belongs deserve record from their extreme rarity, even were there no unsettled points as to the best methods of conducting measures for their relief.

I was called to see Miss L., just past fourteen years of age. Learned from her parents that she was born at or about the end of the eighth month of gestation, and was very small at birth, weighing not more than four pounds. She had generally enjoyed good health until a little over a year ago, when her change of form and appearance seemed to indicate that she had arrived at puberty. About that time she began to suffer attacks of pain, which recurred periodically at about monthly intervals, and which had increased in severity, and gradually lost their periodical character, until now they were extreme in degree, even sometimes causing her to roll on the floor, and came on at uncertain intervals of a few days or a week at most, and lasted several days at a time.

There was one peculiarity of these attacks deserving mention—the position she assumed when suffering. She was accustomed to stand on her left leg, the right one flexed, with the ankle resting just above the left knee. Standing thus, and leaning her hands on some article of furniture, she passed many hours together; on one occasion, fourteen hours, as her parents aver. For a few minutes at a time now and then she knelt, and latterly had been standing sometimes on the right leg, but with the left in the same relative position as above described. This seems to have been one of those instinctive positions in which patients find that they get mitigation of their sufferings.

For four months she had been under the care of a physician, an eclectic, who had been administering medicines to "bring on her turns." She also had been seen once by a regular physician, but no examination had been made or proposed until she came under the care of the gentleman with whom I saw her—Dr. W. P. Weaver, of Miamisburg, Ohio.

Examination showed, in the hypogastric region, a round, smooth, elastic tumor, which extended upwards to the left, and nearly as high as the umbilicus. No opening could be discovered between the labia. By the rectum a round, smooth, elastic body could be felt projecting downwards into the pelvis and its identity with the tumor felt through the abdominal walls was verified. No trace of a vagina could be discovered, but all examination in this direction was very unsatisfactory, from her exceedingly nervous condition, the result of the pain she had suffered.

The nature of the case having been explained, and the necessity of an operation stated, I returned in about a week to perform it. A hypodermic injection of morphia and atropia was administered, and about twenty minutes afterwards she was placed under the influence of the mixed vapors [A. 1, C. 2, E. 3]. She was put in the lithotomy position, and a careful examination was then made, but no vaginal canal could be discovered; there was no vulvar opening—all was solid below the opening of the urethra—and by the rectum, no trace of a vagina, no fibrous cord or thickening to represent one could be felt. A sound having been placed in the urethra, and held by Dr. Weaver, one finger of the left hand was introduced into the rectum, and a transverse incision made with scissors between the labia, and nicked above and below. I then bored with right forefinger upwards towards the uterus, and thus very easily channelled a passage up to the uterus. With a rectum-speculum this passage was then dilated, and afterwards, by the expansion of the blades of a Nott's trivalve speculum. In the next step of the operation vision was of no assistance, on account of oozing of blood, but neither by sight nor touch could any indication be found of a particular point at which to open the uterus. There was not even a dimple to mark the position of the os, nor was there any projecting portion like a cervix; the tumor was nearly globular in shape. I penetrated it with the largest sized trocar of an aspirator until resistance was felt to cease, and withdrew about an ounce of chocolate-colored fluid. The instrument then choked, the fluid being too thick to be withdrawn in this way. I then carefully introduced a bistoury in the same manner and turned it on its edge as it was withdrawn. Keeping my finger in contact with the opening, a uterine dilator was passed in and expanded until the finger passed freely into the uterine cavity. From four to six ounces of the same tenacious fluid escaped. The channel made was syringed out with a solution of carbolic acid, a large hollow tupelo tent placed in the uterus and supported by tampons of marine lint wet in the solution, thus completely filling the artificial canal.

Her recovery from the operation was uninterrupted. The syringe was used daily by the gentleman in charge of the case, and the lint changed. On the third day a large quantity, estimated at a quart, of the accumulated fluid was expelled. I saw her one week after the operation, when I could pass my finger readily up to the uterus, and she was then provided with a vaginal plug, and her mother instructed in its application. Two weeks afterwards, she menstruated naturally and without pain.

Whether the operation should be completed at a single sitting, and whether the uterus should be washed out antiseptically, are the open questions in regard to such cases as this. In regard to the first, it seems to me that there can be no doubt, even when the patient is not, as mine was, at a distance from the operator. The demand, the necessity, for relief are urgent, and it does not seem possible that greater safety will be secured by making successive steps to it, to say nothing of the mental influences on a nervous and timid girl. In regard to the second point, I presume there are few, in these days, who would not wash out the uterus thoroughly. I would not advance against it the plea that danger might arise from passage of the fluid through the Fallopian tubes into the peritoneal cavity. Any fear of such a result, where the imprisoned fluid

has been subjected to pressure, as in this case, for months from uterine contractions, can only be absurd. But safety would seem to be best secured here, as after labor, by efficient contraction of the uterus and obliteration of its cavity, and that where circumstances will allow it, measures to bring about these conditions are the ones for the operator to adopt. However, this is intended to be rather a record of facts, than a discussion of opinions, and the case is reported for whatever benefit may result from it.

THE PATHOLOGY, ETIOLOGY, PROPHYLAXIS, AND TREATMENT OF PUERPERAL FEVER, FROM THE VIENNA STANDPOINT.

BY W. W. JAGGARD, M.D.,
OF CHICAGO, ILL.

THE doctrines of the Vienna School of Obstetrics, upon the subject of puerperal fever, are clear and distinct, from a theoretical standpoint, while purely speculative tendencies have been checked by careful clinical observation and experience, and exact pathologico-anatomical investigation. The colossal material, facilities for observation and experiment, before, during, and after parturition, and the obligatory character of *post-mortem* examinations, afford a field for investigation of unparalleled scope. The protocols, containing minute, accurate records of each individual case, accumulating through long years of patient research, furnish corrective and corroborating statistical evidence.

Add to this the consideration of the names of the illustrious men who have engaged in the study of puerperal fever—Rokitansky, Oppolzer, Skoda, Billroth, Carl and Gustav Braun, Spaeth, Kundrat—and the teachings of this justly famous school are invested with a peculiar dignity, power, and authority.

It is the object of this paper to sketch briefly the salient points in the pathology, etiology, prophylaxis, and treatment of puerperal fever as taught and practised at the present time in Vienna.

I. PATHOLOGY: Puerperal fever is an infection fever, in which inflammations of the genital mucous membranes and serous membranes—most frequently the peritoneum, at times, also, the pleura or pericardium—constitute the most prominent anatomical changes, and possess something of a typical character in so far as a continued fever, of great intensity, with temperature elevations up to and above 41° C., usually coexists (Braun).

The site of the puerperal wound comprehends the entire extent of the mucous membrane lining the uterine cavity, and contributing to the formation of the decidua. The deeper strata of the mucous membrane, and, particularly, Friedländer's glandular layer, are laid bare at an early period in labor, when the fecundated ovum is propelled into the cervix. A broad, shallow surface, extending from the internal os to the fundus, is thus deprived of its epithelial covering, rendered accessible to the air and exploring finger, and infection may occur before any influence has been exerted by the trauma of labor. *It is possible, therefore, that puerperal fever may occur during the last weeks of pregnancy and during the first stage of labor.* That it does occur during these periods is a well-known clinical fact.[1]

When this puerperal wound is infected, the danger results from the qualitative and quantitative development of the blood and lymph vessels, and the neighboring peritoneum. Puerperal infection has its starting-point in a local lesion, which may be situated in or about the vulva, vagina, mucous membrane of the cervix, or the denuded intrauterine surface. Abrasion of the surface, in any one of these localities, is followed by an inflammatory infiltration, which results in the casting off of the superficial layers of the *mucosa*, in the form of a grayish-white or yellow membrane, and in the production of the so-called "puerperal" ulcers. These "puerperal" ulcers, small in extent, and shallow in depth, increase in both directions with astonishing rapidity, until they may occupy the entire vulvar, vaginal, cervical, or intrauterine expanse. About the vulva and in the vagina, stratum after stratum yields to the destructive process, until the perivulvar and perivaginal connective tissue is invaded; the cervix may alone be attacked but the intrauterine surface is more usually involved, the decidua thrown off, as grayish-yellow membranous shreds or fragile masses, and the *muscularis* laid bare.

Birch-Hirschfeld applies to this process the terms puerperal diphtheria, diphtheritic endocolpitis, and diphtheritic endometritis. He implies by this terminology a pseudomembranous necrosis of the *mucosa*, resulting from inflammatory infiltration and molecular destruction of its elements, essentially the same condition as diphtheria of wounds. He denies emphatically any relationship with diphtheritic angina. General unanimity of opinion upon these primary considerations prevails at the present day. The case is very different with the further course of the disease.

Buhl, in 1861, described three chief forms of puerperal fever, and this classification has been accepted in Vienna, in preference to the complicated and forced division of Spiegelberg.

Buhl's three forms of puerperal fever are:

1. Puerperal peritonitis, without pyæmia (endometritis, salpingitis).

2. Puerperal pyæmia, without peritonitis (metrophlebitis).

3. Puerperal pyæmia, with peritonitis (pyæmia with lymphangitis, parametritis).

1. *Puerperal peritonitis, without pyæmia,* includes those cases in which the inflammation extends from the endometrium through the tubes to the peritoneum. The tubes are enlarged, the *mucosa* swollen, injected, and pouts through the fimbriated extremeties; the lumina, increased in size, are filled with thick pus; the uterine *mucosa* presents the characteristic appearances of endometritis; the resulting peritonitis may be circumscribed or general. The external surface of the uterus is of a lively, vermilion color, and upon section fine red

[1] Carl Braun's Gynækologie, p. 853.

lines, due to the extravasation of blood between the muscular fibres, constituting apoplexy of the uterus, are noted.

This form is most frequent when there is no epidemic influence.

2. *Puerperal pyæmia, with peritonitis*, is developed when the infection gains access to the bloodvessels. Infection has its starting-point, by preference, from the placental site, where the endometritis produces ichorous destruction of the thrombi formed in the uterine sinuses. Thrombosis of the veins of the uterine walls, pampiniform and spermatic plexuses result, and the process of embolism is established. Metastatic abscesses are formed in the lungs, spleen, kidneys, and brain. Metastatic inflammation of the joints, serous cavities, superficial and intermuscular fasciæ, constituting phlegmasiæ—skin, constituting erysipelas — may occur. Ulcerative endocarditis is usually present. The spleen becomes enormously enlarged. The blood is fluid and thin, and putrefaction makes rapid progress after death. It is needless to add that such cases terminate fatally at an early period of the disease, with symptoms of profound toxæmia.

This form of puerperal fever is familiarly known as septicæmia.

3. *Puerperal pyæmia with peritonitis* arises when the poison is received into the lymphatics and connective tissue of the parametrium.

As the result of an antecedent puerperal endometritis, the intrauterine surface is covered by a layer of stinking, brownish-colored, decomposing decidua or pus. Ulcers and fissures, covered with molecular *débris*, are found in the cervix. Very rarely, the uterine walls, throughout their entire thickness, in smaller or larger areas, are involved in a gangrenous process; and a condition termed by Boër *Putrescentia uteri* results. The inflammatory process is usually propagated through the intramuscular connective tissue, and follows the lymphatic paths. The lymphatic vessels are seen, especially in the neighborhood of the tubal insertions and cervix, according to the direction of the section, as yellow, dilated, varicose vessels, or as round lumina, out of which pus flows copiously. The vicinity of the lymph vessels is infiltrated with pus; abscesses occur between bundles of muscular fibres, and are sometimes so near the *serosa* that they appear like vesicles.

From the uterine walls the inflammatory process reaches the pelvic connective tissue. The lymphatics, filled with pus, can be seen running through the broad ligaments to the *hili* of the ovaries, causing, at times, purulent infiltration and abscess formation in these organs. The pelvic connective tissue, at the same time with the lymphangitis, is involved in a proportionate parametritis, resulting in purulent collections and discolored serous effusions, shading off into lighter degrees of œdema. The inflammation may involve the connective tissue of the abdominal walls and lower extremities, where it frequently acquires an intense, phlegmonous character. The peritoneum is reached, through the subperitoneal connective tissue, usually upon both lateral surfaces of the uterus. The fimbriated extremities of the tubes become the seat of the inflammatory process. General peritonitis, with serous, fibrinous, purulent, or ichorous exudations, is rapidly developed, and may be extended through the diaphragm into the pleural cavities. *Meteorismus*, as the result of the serous infiltration of the *muscularis*, is marked. Parenchymatous degeneration of the liver, kidneys, and spleen, ulcerative endocarditis, usually accompany this form of the disease.

Microscopic examination of the uterine walls reveals diffuse infiltration of the intramuscular connective tissue by pus corpuscles and molecular *débris*. The muscular fibres are swollen, and the nuclei are dark colored. This condition of the intramuscular connective tissue and of the muscular fibres explains the extreme fragility and brittleness of the uterine walls in women suffering from puerperal fever.

The infection may arise in vulvar or vaginal "puerperal" ulcers, but the mode of origin sketched in the foregoing sentences represents the more usual condition.

The children of women affected with puerperal fever succumb frequently to the poison received through the maternal blood. The infection may occur during pregnancy, and this fact demonstrates, beyond possibility of doubt, the transference of the poison by the maternal fluids. Ecchymoses and inflammations of the serous cavities, phlebitis and umbilical arteritis are usually observed. The umbilicus is frequently the place of invasion. (Braun.)

This form of puerperal fever is of most frequent occurrence, and is referred by Virchow to the class of phlegmonous inflammations and pseudo-erysipelas.

These different forms of puerperal fever may occur simultaneously in the same epidemic. It is not necessary, however, to invoke a qualitative difference in the infection, or "*materia peccans*." The variance in symptomatology and pathologico-anatomical conditions is fully explained by the different paths selected by the poison. (Birch-Hirschfeld.)

The results of all pathologico-anatomical investigation of puerperal fever point to the reception of a disease which has its origin in the genital canal, and demonstrate the occurrence of relationships in puerperal fever of exactly the same nature as in the pyæmic infection of wounds. (Braun.)

II. Etiology: The general proposition that puerperal fever is infectious, that is, is transferable from a diseased to a healthy woman, may be regarded as demonstrated.

Cruveilhier (1831), Semmelweis (1847), Simpson (1850), Rokitansky, Skoda, Oppolzer, Winckel (1869), Spiegelberg (1870), Schroeder (1874), Landau (1874), Lee (1875), Kehrer (1875), and numerous other observers have abundantly established this proposition. It is a fact of positive knowledge. The nature of the infection, the "*materia peccans*," is a controversial subject.

Before entering upon the discussion of this subject, it is well to repeat the statement, that the Vienna School of Obstetrics recognizes strict analogy between puerperal fever and septico-pyæmic processes in general.

Three theories as to the nature of the infection,

materia peccans, of puerperal fever, are entitled to consideration. They are:

A. The bacterial theory.

B. Billroth's phlogistic zymoid and putrid poison theory.

C. The miasmatic theory.

A. The Bacterial Theory.—Mayrhofer (1865) demonstrated the presence of numerous vibriones in active motion in the secretions from the genital canal of patients suffering from puerperal fever, in the Vienna obstetrical clinics. Virchow and Buhl described, about the same time, fine molecular masses in similar secretions. Later, Waldeyer corroborated the researches of Mayrhofer, and demonstrated the presence of vibriones in the covering of "puerperal ulcers," lumina of the uterine lymphatics, infiltrations into the connective tissues of the parametrium, exudations into serous cavities, and asserted that the molecular masses of Virchow and Buhl were composed of micro-organisms. Heiberg followed, and supported Mayrhofer so far as concerned the actual presence of vibriones, but expressed himself reservedly as to their causative relation. Orth emphasized the discoveries of his predecessors, but claimed that the sphero- and not the rod-bacteria were causative. Birch-Hirschfeld recognizes the position of the latter observer. Klebs, Rindfleisch, Cohn, Recklinghausen, and Hueter may be added to the number of distinguished pathologists who believe bacteria to be the essential cause in all septico-pyæmic processes.

B. Billroth's Theory of Phlogistic Zymoid and Putrid Poison.—Billroth (1874) opposed the bacterial theory by his thorough and exact researches into the nature of accidental wound fever. Billroth's theory receives its best exposition in his own words:

"The etiological relationship of bacteria to septic diseases and putrescence of the blood is by no means to be regarded as demonstrated.

"Out of the acutely inflamed connective tissue, is added to the pus a ferment similar to zymoid material (Phlogistic Zymoid), which induces its decomposition. By this means the pus, before an uncongenial soil for the development of micrococci, now becomes a peculiarly favorable menstruum for their multiplication—it is unsettled whether this zymoid, as such, is assimilated by the micrococci, or whether it induces a decomposition in the pus upon the products of which the micrococci live. Zymoid and micrococci can then no longer be separated from the pus, without the annihilation of its zymoid action.

"The further existence and action of the zymoid are not conditioned upon the vegetation of the micrococci; the decomposition continues even if the micrococci perish.

"By Phlogistic Zymoid is understood a substance which, produced by inflammation, is capable again of producing inflammation.

"There is no doubt that coccobacteria are not necessary to produce pernicious forms of acute inflammations, and they are not necessary in the diffusion of these inflammations throughout the body; that coccobacterial vegetations are not, as such, ferment producers; that these organisms must bring within themselves, or upon themselves, the specifically active substance; that they are not ferment bearers under all circumstances, but are only then ferment bearers when they come out of a fluid in which the specific ferment already existed.

"Every acute inflammation has a stage in which it produces secretions capable of infection, and the infective capability of diphtheritic secretions possesses no peculiarity, except that this stage lasts a peculiarly long period of time.

"Recently Panum has obtained from macerating, decomposing meat a substance, soluble in water, and containing no albumen—so-called extract putrid poison; in addition to this, he found a second substance of exquisitely narcotic action. Bergmann obtained from decomposing beer-yeast, a crystallizing body, which he calls sepsin. Finally, Zuelzer and Sonnenschein have discovered a substance resembling an alkaloid, of septic action."

The phlogistic zymoid and putrid poison are closely related, and ultimately identical, since the chemical processes within the parenchyma of acutely inflamed tissue and decomposing tissue are analogous.

Rokitansky, Jr., (1874) found bacteria in the lochial discharges of healthy puerperal women, and Haussmann discovered micrococci in eleven per cent. of pregnant and two per cent. of non-pregnant women. Septic infection occurred in none of the women. Wolf and Landau have expressed themselves in opposition to the bacterial theory. Panum and Küssner have demonstrated that micrococci are not the direct bearers of infection. A putrescent fluid, after eleven hours' boiling and destruction of all micrococci, retained its infectious action. The researches of Billroth, Tiegel, and Bechamps, supported by those of Ranke, Demarquay, and Hueter, go far to show that bacteria are normal constituents of the human organism. Finally, no unanimity of opinion exists among the exponents of the bacterial theory; no two observers of prominence agree in all particulars. In the words of Carl Braun:

"The significance of bacteria in the etiology of surgical and puerperal fever seems to be a subordinate one; they seem to have no influence upon the origin, and, perhaps, even no important influence upon the course of surgical fever. The putrid poison kills and produces fever, with or without bacteria."

C. The Miasmatic Theory—By miasm is understood a fungacious contagium; not a gaseous body, but dried spores of vegetable organisms, which, being brought in direct contact with wounds, cause infection. This theory has no tangible basis; it has not been demonstrated that these dried spores are in the condition to preserve their viability. Vegetable organisms are destroyed by high temperatures, while boiling for hours has no effect upon sepsin. The theory, therefore, is totally inadequate to the explanation of the phenomena.

The causes of puerperal fever are:

a. Lacerated and contused wounds, gangrene of the genitals, as the result of difficult labors.

b. Decomposition of portions of the placenta or membranes retained within the uterine cavity.

c. Increase of a primary endometritis, vaginitis, or vulvitis to a parenchymatous inflammation, during the puerperium. The catarrhal secretions flow over the injured mucous membranes, act as irritants, and produce ulcers, which may give

origin to phlegmonous inflammations. The term autoinfection has been bestowed upon this condition. Virchow, Winckel, and Braun are of the opinion that an infection of the injured mucous membranes is unnecessary. The increase of the catarrhal inflammation, by means of chemical and mechanical irritants, to a phlegmonous form is amply sufficient to explain the phenomena.

d. Infection of injured portions of the genitals with secretions from ichorous wounds, or cadaveric substances. Infection may be conveyed by the air penetrating to the parts, or by contact with the exploring finger or instrument.

Occurrence: Individual cases of puerperal fever occur in hospitals and private dwellings, among the rich and poor, in people of the most diversified constitutions, and at all periods of life. *Individual cases and epidemics of puerperal fever occur quite as frequently in private practice as in well-conducted hospitals.* Winckel demonstrated the truth of this proposition, so far as pertains to the kingdom of Saxony. Upon investigation of the records of fourteen hundred and eighty-six midwives, he found that more than seven per cent. of all midwives of the land, in the year 1874, reported a mortality of three per cent. of their puerperal patients from puerperal fever.

(*To be concluded.*)

MEDICAL PROGRESS.

The Physiological Action of Bromoform.—Dr. Caj. Frieh. von Horoch, of Vienna, at the close of a paper on this subject, draws the following conclusions:

1. The respiration shows no noteworthy variations.

2. The motor centres of the heart do not suffer under the narcosis, and the pulse remains strong and normally frequent.

3. The peripheral ends of the vagi retain their irritability.

4. The blood-pressure, lowered by the narcosis, stands, in dogs, between fifty-seven and thirty-six millimetres. If in the course of an experiment narcosis is stopped, the blood-pressure becomes normal, but falls again when the animal is again narcotized. The centres which control innervation of the bloodvessels do not seem to be so sensitive to electrical stimuli as in the normal state.

5. The reflex irritability was always entirely lost; irritation of the sciatic nerves with the strongest currents had no influence on the blood-pressure.

6. Direct irritation of the vaso-motors (splanchnics) gave no results in deep narcosis, and relatively slight results in slight narcosis.

7. The irritability of the motor centres of the cerebral cortex was completely lost in deep narcosis; in this respect bromoform seems to be similar to other anæsthetics.

8. The temperature gradually sinks in experiments on animals—in dogs, as much as 5° F.—*Medic. Jahrb.*, 1883, Hft. iii., iv.

Œsophagotomy.—Prof. Edward Lawrie, of the Lahore Medical School, reports the case of a woman, æt. 35 years, who was admitted into Mayo Hospital, on December 14, 1883, with a large gall-nut impacted in the gullet. She had been suffering previously from an affection of the eye, and was told by a friend that if she held a gall-nut in her mouth for two hours she would be cured. While giving this plan of treatment a trial, the nut slipped down her throat and lodged in the cervical portion of the œsophagus. During the twenty-four hours following her admission every attempt to dislodge it failed. On the 15th, the patient was very low and distressed, and it was decided after consultation with his colleagues to perform œsophagotomy. The operation was carried out in the usual way, by dissection through the loose cellular tissue between the carotid vessels and the trachea, till the foreign body was felt through the walls of the œsophagus, which was opened by a longitudinal incision, and the nut removed. The woman was fed through a tube for five days, swallowing was perfectly restored in twelve days, and she was discharged cured in three weeks.—*Lancet*, March 8, 1884.

Vesical Calculus Having a Sequestrum of the Pubic Bone for a Nucleus.—Dr. E. Vincent, of Lyons, reports the case of a man, æt. 35 years, who had suppurating sores on all his limbs from justa-epiphyseal osteitis; some of the joints were ankylosed. He had a vesico-femoral fistula, and was greatly troubled with urinary difficulties. All the urine did not pass through the fistula, but the greater part escaped through the juxta-trochanteric fistula. On introducing a sound into the bladder, it stopped at a rough surface in the prostatic region; this, on further examination, was found to be the denuded pubic bone. When the instrument was passed into the bladder, a very large calculus was recognized. The diagnosis was vesical calculus, due to a fragment of the pubic bone, which had fallen into the bladder. The process seemed to have been as follows: there had been an osteitis of the left pubic bone, which terminated by necrosis; an abscess formed, which opened simultaneously into the bladder and through the thigh. When the sequestrum separated it fell into the bladder.

The lateral operation was performed with the galvano-cautery, the calculus removed, and the diagnosis confirmed. The patient recovered.

Vincent also reports a case in which he removed a thermometer from the bladder.—*Ann. des Mal. Génito-Urin.*, March 1, 1884.

Extirpation of the Larynx in an Old Man.—Dr. H. Leisrink reports the case of a man, æt. 72 years, whose parents had died at the age of ninety-five years. The patient had never been sick until two years ago, when he noticed a slight hoarseness. In about a year complete aphonia came on. Afterwards there was impossibility of swallowing anything fluid, and then four days before he was seen attacks of dyspnœa commenced. This was so distressing that he applied for relief. The heart, lungs, and kidneys were found to be sound. Carcinoma of the larynx was diagnosticated, and tracheotomy was performed preliminary to excision of the larynx. Five days afterwards the larynx was removed by Gussenbauer's method. The epiglottis was left, as it was not involved. The mucous membrane of the pharynx was adherent to the posterior surface of the larynx. The Michael tampon-canula, which had been placed in the trachea, answered excellently. The wound

was dressed with sublimate gauze and granulated well. The temperature did not rise above the normal. For several days food was administered through the œsophageal tube, and then through a No. 18 elastic catheter. Up to the fifth day only fluid food was administered. The patient left his bed on the fifth day after the operation, and three months afterward was completely well, but he died in the fifth month of croupous pneumonia.

Although the age of the patient contraindicated an extensive operation, it was thought that the extension of the carcinomatous process to the neighboring glands would soon cause so large a growth that nutrition would be impossible.—*Berl. klin. Wochens.*, February 4, 1884.

SPHACELUS OF THE BLADDER IN DIABETES.—M. TRONCHET, of Bordeaux, reports (*Journ. de Méd. de Bordeaux*, No. 23, 1883) the case of a man æt. 75 years, who, for some time, had had attacks of painful urination and intermittent nocturnal incontinence; the urine was abundant, clear, and without albumen, but contained sugar in large quantity. Being taken with an attack of complete retention, he was catheterized several times with difficulty, on account of stricture; a catheter was then left in place. The patient died in six days, after a progressive diminution of urine, which had become muco-purulent.

At the autopsy it was found that, beside the stricture and hypertrophy of the prostate, the bladder was in a gangrenous condition. It was very prominent above the pubis, presenting, exteriorly, a deep-violet color. Its tissue was extremely friable, and its internal surface covered with a pultaceous mass, the whole somewhat resembling pulmonary gangrene.—*Ann. des Mal. Genito-Urin.*, March, 1884.

NEPHROTOMY.—This operation was performed on February 27, at the Western Infirmary, Glasgow, by DR. PATERSON. The patient was a young woman, æt. 28 years, who had suffered for some years from symptoms of renal calculus. On cutting down to the left kidney some ounces of pus were evacuated, and a stone, weighing one drachm, was removed from the interior of the organ. At last accounts the result of the operation was all that could be desired.—*British Med. Journal*, March 18, 1884.

EXTIRPATION OF AN INTRAUTERINE MYOMA BY MEANS OF THE GALVANOCAUSTIC LOOP.—DR. E. F. FABBRI, of the University of Modena, reports the case of a woman, about thirty-four years old, upon whom he operated. Various means having been used to control the loss of blood and the pains, a thorough physical examination having shown that the growth, which was very large, could be extirpated, though only with considerable difficulty, it was determined to operate. The chief difficulties in the way of operation were the size of the tumor and the fact that the vagina was small, the woman having had no child.

It was not thought best to operate just after menstruation, as the tumor was larger at this time. Fabbri determined, therefore, to operate between the periods of menstruation. In order to obtain dilatation of the external orifice, he provoked uterine contractions by the aid of an elastic vaginal tampon, such as is used in premature artificial delivery. After having dilated the os and drawn the tumor down, the galvanocautery was introduced, the loop being double the long diameter of the tumor. The loop was pushed up to the base of the tumor by means of what Fabbri calls a forked spatula. After considerable difficulty the loop was adjusted and the rheophores were turned on. The loop was drawn slowly, so as to thoroughly cauterize the surfaces. In four minutes the tumor was removed from its attachment, and, after considerable difficulty, from the uterus. The patient recovered easily. The tumor was about the size of a duck egg, and covered with very adherent mucous membrane, except over the anterior two-thirds of its upper extremity, where there was a zone of fibro-muscular tissue.

Fabbri advises the following for exploring the uterus when it contains a large tumor: He does not think well of the Sims's sound, as it is too flexible, and is easily bent by an obstruction, so that the operator is deceived. Instead of this he uses a sound of white metal, the uterine extremity of which has the shape of a finger, but is more flat, has a diameter of two-fifths of an inch, and is slightly olivary. Its shaft is slightly flattened and curved on the flat, but is easily placed in any desired curve. At the close of his paper he draws the following conclusions:

1. Intrauterine myomata of intermittent appearance are probably always free throughout their whole length, and attached near the fundus uteri.

2. In order to explore the uterus which contains a tumor, one should use a sound the extremity of which is somewhat spoon-shaped.

3. For extirpating intermittent myomata, if one operates between the menstrual periods, the os should be dilated, and uterine contractions brought on by means of the elastic tampon, and, if necessary, by introducing an elastic bougie into the uterus.

4. The galvanocautery is preferable to all other methods for removing these growths.

5. Simple carbolic injections are not sufficient for antisepsis; carbolated compresses should be applied to the vulva.—*Annales de Gynéc.*, February, 1884.

GALVANOPUNCTURE IN ANEURISM OF THE AORTA.—DR. FRANCESCO BRANCACCIO reports the case of a man, æt. 64 years, of intemperate habits, who complained of pain in the left anterior part of the chest, over the base of the heart, which radiated to the shoulders. The pain came on suddenly after a muscular effort, and was intermittent. Examination revealed a tumor, limited above by the upper border of the second rib, on the right by the sternum, on the left by the mammary line, and below was continuous with the heart. The diagnosis of aneurism of the ascending portion of the aorta having been made, it was determined to practise galvanopuncture. A fifteen cell Daniell's battery was used, two needles being carried into the sac through the third interspace to a depth of one inch and one-fifth, and an inch and a half apart. The first seance lasted sixteen minutes. In the afternoon the patient felt better, the tumor was smaller, the pulse, which had fallen from 118 to 90, was stronger, and the respirations were less frequent. Twenty days afterward the battery was again used, with twenty elements, for fourteen minutes. Altogether is was used four times, and the patient was completely cured.—*Revista Internaz. di Med. e Chir.*, February, 1884.

THE MEDICAL NEWS.

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SATURDAY, APRIL 19, 1884.

THE DISINFECTION OF THE SPUTUM OF TUBERCULOSIS.

AMONG many other valuable papers to be found in the second volume of the reports of the Imperial Board of Health of Germany just issued, under the editorship of Dr. Struck, is one by DRS. SCHULL and FISCHER upon the disinfection of the expectoration of phthisical patients. These experimenters treated the dried and moist expectoration by various germicides, with a view of determining those which would be at once most efficient and available in practice.

They ascertained, in the first place, that dried sputum, from 95 to 126 days old, was in all instances capable of producing tuberculosis in guinea-pigs inoculated with it. From this age its activity progressively diminished. Thus, of 3 guinea-pigs inoculated with sputum 143 days old, which was active at 95 days, 2 were infected. Of 3 pigs inoculated with the same sputum 186 days old, only 1 was infected, and of 3 inoculated with the same sputum 226 days old, none was infected. This activity they ascribed to the spores of the bacillus, since it has been experimentally shown, also, that the bacilli themselves are not to be found in sputum of this age.

We have not space to note the methods employed in treating sputum by the various substances and measures used, but pass directly to the results. Control-experiments were made in every instance with non-disinfected sputum, which was invariably found capable of producing tuberculosis.

1. Experiments with dried sputum. Almost all the methods used to disinfect dried sputum were successful. They included treatment of sputum from 98 to 143 days old, heated to from 212° F. to 266° F., sputum boiled for 5 minutes, and sputum treated for from 20 to 24 hours with corrosive sublimate 1 in 5000 and 1 in 2500; carbolic acid 1 in 100; liquor ammonia 16 in 100; caustic soda 1 in 100; iodide of pótassium 5 in 100; iodoform vapor, iodoform, iodine, and iodine vapor.

Steam, solution of arsenious acid, and dry iodoform vapor were alone unsuccessful.

2. The disinfection of fresh, undried sputum was not nearly so successful. The details of the experiments would occupy too much space, but of a large number of substances used in various degrees of concentration, including absolute alcohol, creasote water, the vapor of paper saturated with creasote, thymol in alcohol, arsenious acid, naphthalin water and vapor, solutions of iodide of potassium, bromide of potassium, bromine, iodine, iodoform, salicylic acid, carbolic acid, vapor of filtering paper saturated with oil of turpentine, acetic acid, spirit of hartshorn, chloride of sodium, aniline water, vapor of filtering paper saturated with aniline oil, caustic soda, and caustic potash, all failed to disinfect the sputa. Only the twenty hours' action of absolute alcohol, twenty-four hours' treatment with a saturated solution of salicylic acid, three per cent. solution of carbolic acid, acetic acid, caustic ammonia, saturated solution of aniline, and vapor of aniline oil, all acting through twenty hours, were effectual in destroying the activity of the sputum. The *two hours'* action of a five per cent. solution of carbolic acid, of a saturated solution of aniline, and of spirit of hartshorn did not destroy the infectious properties of the sputum.

Of the measures and substances which had appeared efficient in destroying the virulence of dried sputum, further experiments were made only with those which seemed available in practice, that is, dry and moist heat, corrosive sublimate, absolute alcohol, carbolic acid, and saturated aniline water. With dry heat, a specimen rich in spores, which five days previously had been allowed to dry upon a glass plate, was scraped off and a quantity, equal in bulk to a small bean, was enclosed in a capsule made of filter-paper, and further in a piece of linen three layers in thickness, and placed near the bulb of the thermometer in a drying-chest in which the temperature had been raised to 212° F., the object being to imitate the conditions under which clothing and other materials soiled with sputum would be disinfected. After an exposure of 15, 30, and 60 minutes respectively, the sputum was rubbed up with sterilized water in sterilized glass dishes, and injected with sterilized syringes into the abdominal cavity of guinea-pigs, controlled by experiments with non-disinfected sputum. The result proved that such exposure for an hour was insufficient to

disinfect the sputum with certainty, although more efficient than exposure for 30 minutes. Whence it was inferred that several hours' exposure would be effective.

It has been seen that an exposure of dried sputum to steam at 212° F. for 15 minutes, was not sufficient to sterilize it, but from 30 to 60 minutes was. So too fresh undried sputum after an exposure of 15 minutes to steam at 212° F., was rendered harmless. Similar results followed the boiling of sputum which control-experiments showed to be virulent.

The action of corrosive sublimate solutions upon the fresh, moist sputum was disappointing, and somewhat different from what might have been expected from recent experience. In the first place, solutions of 1 to 5000 of water, which seemed quite efficient in destroying the infecting powers of dried sputum, when added in the proportion of two parts to one of the sputum, making, therefore, a strength of 1 to 7500, were without effect. Then sputum treated with sublimate solutions 1 to 500, when injected into the abdominal cavity, caused death by poisoning. Finally, solutions of the strength of 1 to 1000 failed also to disinfect the sputum. Whence the experimenters concluded that corrosive sublimate is not adapted for disinfection of fresh sputum. In atttempting to account for the difference between these results and that of corrrosive sublimate upon dried sputum, they suggest that this had already lost some of its virulence before being treated, or that the corrosive sublimate being brought into contact with smaller particles of sputum, reached the spores more effectually, while in the case of the fresh sputum its contact produced a superficial coagulation which interfered with any germicidal action.

Further experiments with absolute alcohol showed that it could only be relied upon when used in the proportion of five times that of the sputum treated. So that it, too, is not practically available.

Carbolic acid, on the other hand, proved quite efficient, a 5 per cent. and 10 per cent. solution serving to disinfect an equal bulk of fresh sputum, although a 2½ per cent. solution was inefficient.

Saturated solutions of aniline water, containing 3.2 per cent. of aniline, served to disinfect sputum, when added in the proportion of ten times the quantity of sputum. While answering the purpose, therefore, it cannot be considered as suitable as carbolic acid, because it is at once more costly, and is further characterized by an odor even more unpleasant, while it is also more or less poisonous. *So that the best disinfectant for spit-cups used by phthisical patients would seem to be carbolic acid, with suitable solutions of which these utensils may be partially filled.*

So, too, the ordinary scalding and boiling to which the clothing of patients and others is subjected, is sufficient to destroy the virulence of tubercle bacilli; and as carbolic acid in the spit-cup will kill the bacilli expectorated into it, there should be no danger, if these simple precautions are taken, of disseminating phthisis through the sputum.

RUPTURE OF THE POPLITEAL VESSELS IN FORCIBLE EXTENSION OF ANKYLOSED KNEES.

THE treatment of fibrous angular ankylosis of the knee by forcible and sudden manual extension is liable to be attended with certain mishaps, of which the most common are separation of the condyles of the femur and the upper epiphysis of the tibia, and tearing of the skin of the popliteal space. Another risk, to which little attention has been directed in our text-books, is gangrene of the limb, from laceration or compression of the popliteal artery, but the accident is so rare that it was met with only four times out of five hundred and eighty cases in the hands of Bardeleben, Bauer, Busch, Hofmokl, B. Langenbeck, M. Langenbeck, Louvrier, and Nussbaum.

To these risks DR. SALZER, of Vienna, adds five examples of rupture of the popliteal vessels, the details of which may be found in the *Wiener Medizinische Wochenschrift*, Nos. 8 and 9, 1884, and of which three were under the charge of Billroth, and one each under the care of Gussenbauer and Nicoladoni. In all, the disease was of long standing. In three, the artery was completely ruptured, and in two, the lesion was incomplete and lateral. In four, the vein was also lacerated, and in three, the integuments were torn. Gangrene ensued in three cases soon after the procedure, and necessitated amputation through the thigh, of which one proved fatal from septicæmia. In the fourth case, gangrene set in after ligation of the ruptured artery and vein, and the patient succumbed from septicæmia after disarticulation at the hip-joint. In the fifth case, immediate amputation was followed by recovery.

With one exception, the vessels were surrounded by indurated tissues and were adherent to the posterior ligament of the knee-joint, which, as would naturally be expected in cases of chronic ankylosis, had undergone adapted shortening or contraction. Hence, when the ligament gave way under the forcible manipulations, the artery and vein necessarily met with the same fate. In such cases it would be far more wise not to resort to force, but to endeavor to correct the deformity by gradual and well-directed efforts at extension at several sittings. Should the limb grow pale and the temperature become lowered, there would be ground to suspect adhesion of the vessels to the posterior capsule of

the joint, when further manipulations should be temporarily abandoned.

THE AMERICAN MEDICAL ASSOCIATION.

The thirty-fifth annual meeting of the American Medical Association will soon be held, and our thoughts naturally turn to the results which have been achieved by the Association. While we recognize that much good has been the outcome of these annual gatherings of the profession, we feel that still more can be attained, and that it becomes the duty of the wise men who influence the action of the Association, calmly to consider how its utility can be enhanced, and what means can be employed to strengthen our great national organization. To attain its greatest scope of usefulness it must have the hearty sympathy and faithful coöperation of the whole profession; it must bind to it, not alienate from it, the workers in the ranks.

It is a matter of notoriety that there has been much dissatisfaction of late, with the results of the work of the Committee on Nominations, especially in regard to the selection of officers of Sections. We know that this Committee has a great deal to do; its members have to sacrifice, in large measure, not only attendance upon the general, but also upon the sectional meetings. Beside, they are solicited by this aspirant or that, or by friends of the self-proposed candidate, to give him a prominent office. Some of the scenes of solicitation, personal and persistent, that transpire at each meeting of the Association, make one blush for the modesty and humility of the medical profession. We are therefore inclined to be very charitable to the forty gentlemen to whom their respective State delegations have assigned the important duty of selecting officers for the Association and its Sections, yet we have not enough charity to say that their duty is uniformly, or even usually, well done.

The Nominating Committee is a large, unwieldy organization. From the number of offices to be filled, and because of the number of aspirants for office, an opportunity is given for combinations, for bargains, for that which is known among politicians as "log-rolling"—an opportunity which, judging by results, is rarely neglected. At the same time, the fact of the Committee being so large reduces to a minimum the responsibility of each member; and the saying of a well-known author, in commenting upon Solomon's adage,—"In a multitude of counsellors there is safety—yes, safety for the counsellors, but not for the counselled,"—is verified. Let one scrutinize, for example, the list of the officers of Sections for the last few years, and while he will find the names of some who are recognized authorities in their special departments, he will find the names of others who hold no such position, and of late the names of some who, it is alleged, have not even been, uniformly, upholders of the Code of Ethics of the Association, and of others, again, who are utterly unknown, either for good or evil, for learning or ignorance. Now, such appointments are disheartening to those upon whom the Association is compelled to rely for its scientific and practical work, and they weaken the general professional respect in which the Association is held.

Is there no remedy for this great evil? Would not the results be better if the work of the general Nominating Committee were confined to nominating the general officers, and if each Section were allowed to nominate its own officers? The members of a Section, it may be safely assumed, know better who are the representative men in their own special department, and who would be the most suitable and acceptable officers to guide their own deliberations, than a general Nominating Committee of forty or more members selected from the Association at large. Moreover, this plan commends itself to favorable consideration because it would do away with the probability—almost with the possibility—of making combinations and of log-rolling.

There can be no doubt that the unsatisfactory manner in which the Sections have been officered has been a large factor in promoting the growth of the numerous "American" special societies, which, of late, have grown up, and which, with the contemplated Society of Internal Medicine, cover the field of every one of the Sections. There seems to be no better way of discouraging the growth of these special societies, and of recalling their members into the general fold, than by giving to each Section of the Association the power of controlling its own organization, subject to the general laws of the parent body.

While, of course, a change from the present unsatisfactory way of making nominations cannot be made this year, yet we hope that steps to this end will be taken, and that it will be accomplished at the meeting to be held next year.

MARRIAGE AND MITRAL STENOSIS.

In a recent clinical lecture at *la Charité*, Dr. Landouzy stated that the mitral orifice is anatomically narrower in women. On the other hand, the hyperalkalinity of their blood leads to sclerosis. These conditions explain the frequency of mitral stenosis in women. Nevertheless, as long as the left auricle, says the *Journal de Médecine*, remains in good condition, the primary lesion makes but little progress; but when the great, vital test of pregnancy comes, there is danger.

Porak's statistics show that in gravido-cardiac disorders, as they are called, more than two-thirds of the cases are those of mitral stenosis, mitral insufficiency, or the two combined. Obstetricians are agreed in advising that a woman suffering with mitral disease, especially mitral stenosis, should not marry; or, being married, she should not have a child; or, having given birth, she should not nurse. A woman with mitral disease having been married, and becoming a widow without having borne a child, is in a most favorable condition if she remains content with widowhood. So, too, religious celibates who preserve their continence may have mitral stenosis, and live to the age of grandmothers.

Landouzy mentions the case of a young girl, who had been in the hospital under his care, and whom he had advised not to marry, but who disregarded his advice, married, became pregnant, and, after a miscarriage, died suddenly in an attack of asystole.

Of course, in cardiac disease, it is well to discourage marriage, but, in regard to such action, the old fable of Cupid being blind has countless illustrations, and at the bridal altar these very maidens, like other brides, deck themselves with orange flowers, the very symbol of fecundity — whether they know this or not — when they ought not to have a single pregnancy. But, when married, they are advised not to have children. How many women can control this matter? To avoid reproduction is very easy to advise, very difficult to do. Possibly it might be well to counsel these cardiopathics to prepare for marriage by first undergoing Battey's operation. But when the wife is not sterilized in advance, a similar proposition might be made to the husband, and in the day when our gentle sisters become professors of diseases of the male sexual organs, possibly normal orchidectomy may occupy as important a place in the surgical therapeutics of diseases of men as normal ovariotomy now does in diseases of women.

However, we are not sanguine that either plan of treatment for the prevention of pregnancy will be adopted; but we are inclined to think that germicide solutions may continue to be in demand by cardiopathic wives.

TRAUMATIC ANEURISM OF THE VERTEBRAL ARTERY.

In the *Archives of Medicine*, for April, 1884, may be found the report of a case of traumatic aneurism of the right vertebral artery high up in the neck, which is interesting, not only on account of the rarity of the lesion, but from the fact that DR. R. F. WEIR succeeded in effecting a cure by digital compression over the lower and anterior edge of the sac, in seven hours.

Dr. Weir tabulates eight similar cases, in which the error was committed of ligating the carotid artery. All proved fatal. He also refers to the case of Möbres, cured by the application of cold after pressure on the exposed external carotid had produced no effect on the tumor, and to that of Kocher, cured by graduated compresses of carbolized gauze acting on a pledget of splint, dipped in perchloride of iron, and crowded into the space between the transverse processes of the fifth and sixth cervical vertebræ. Hence, in the two cases in which the diagnosis was made, digital compression and direct compression have proved successful.

The great difficulty is in arriving at a correct diagnosis, which, Dr. Weir says, may be done by "carefully considering the effect of pressure on the carotid, not only above, but also on a line with the transverse process of the sixth cervical vertebra, or rather over the anterior or so-called carotid tubercle. Compression above this point affects, as a rule, the carotid artery only; over and below the transverse process compression will not only occlude the carotid but also the vertebral artery, which runs to its outer side. It must be remembered, however, that the vertebral, instead of entering the foramen in the transverse process of the sixth cervical vertebra, in its upward course sometimes remains exposed until it enters a higher foramen. To meet such possibilities, it has been suggested to isolate the carotid according to Rouge's plan, which is, with the sterno-mastoid relaxed, to grasp the muscle with the finger and thumb and to pinch the carotid between them. It is necessary also to keep in mind, in trying to effect vertebral compression, that the carotid tubercle is, according to Chassaignac, always from two to three inches above the clavicle. A traumatic aneurism whose pulsations are unaffected by compression of the carotid applied as above detailed, will be found to concern the vertebral artery."

In the treatment, ice and compression by bandages or the fingers having failed, the sac should be opened, the finger applied to the wounded artery until the clots are cleared away, and firm antiseptic plugging be resorted to, as was successfully done by Kocher in a case of aneurism, and by Kuester in two examples of wound of the artery.

OSMIC ACID IN NEURALGIA.

THE hypodermatic injection of from eight to fifteen drops of a one per cent. solution of osmic acid in peripheral neuralgia does not, upon further experience, fulfil the expectations which the first trials of Neuber led us to anticipate. Of 29 cases recorded by EULENBERG, in the *Berliner klinische Wochenschrift*, No. 7, 1884, there were only 7 cures, if

freedom from recurrence for periods varying from two to fourteen weeks be taken as the criterion of perfect recoveries. That the remedy does, however, exert a certain beneficial effect is shown by the fact that the pain disappeared without the employment of other remedial agents. Hence, it may be used, before resorting to anodynes, in examples of recent and uncomplicated forms of the affection, with some hope of success.

REVIEWS.

Hints on the Drainage and Sewerage of Dwellings. By William Paul Gerhard, Civil Engineer. 12mo. pp. 302, with 282 illustrations. New York: William T. Comstock, 1884.

Some years ago the author of this volume published in the fourth annual report of the State Board of Health of Rhode Island, a very satisfactory paper on "House Drainage and Sanitary Plumbing," which has since been used as the basis of a little manual on the same subject. The present work is an amplification of that paper, and is a highly creditable production. It is a *résumé* of the latest and most authentic information on the drainage and sewerage of dwellings, written in a plain and intelligent manner, and abounds in illustrations, which are indispensable in a work of this character.

The book opens with a statement of the general principles involved in house sanitation. The first chapters are devoted to an exposition of the common defects in the drainage and sewerage of buildings. In the remaining chapters, the principal features of a properly devised and well-constructed system of house drainage are plainly pointed out. This branch of the subject is discussed under the following headings: Drainage of Dwellings, Internal Sewerage of Dwellings, Description of Plumbing Fixtures, General Arrangements and Care of Fixtures, and External Sewerage and Disposal of Household Wastes.

The author properly condemns the covering of the top of the soil-pipe with a return-bend or ventilating cap, as a mistaken practice. The great importance of ventilating soil-pipes, traps, etc., is insisted upon, and the proper methods described. The description of traps is complete, but is rather wearisome by its length. It is hardly necessary to describe the numerous devices of this kind. A few of the best designs, illustrative of the objects to be secured, would have answered the purpose, without needless repetition of details. Privy-vaults and cesspools are rightly condemned as abominations which should never be tolerated where the water-carriage system is available. The author gives his preference to closets without any movable machinery, that is, the hopper closet and the wash-out closet. He insists that all plumbing fixtures should be, as far as possible, in plain sight. The open arrangement of the fixtures throughout the building is advantageous for cleanliness, and for ready inspection and ease in detecting faults, and in making repairs. He does not deem it essential to health that all these modern conveniences, if they are properly designed and well executed, should be banished from the main portion of the building.

The book is a faithful representation of the principles and practices advocated by the best authorities in the country, and will serve as a valuable guide to architects, engineers, physicians, and sanitarians, and especially to householders, whose duty and interest it is to have intimate knowledge of all matters pertaining to the drainage and sewerage of the dwelling.

The omission of an index is a most serious fault in any book, but it is especially embarrassing in one made up largely of details. The full table of contents cannot compensate for this error. The work of the publisher is fairly well done.

The Medical Directory of Philadelphia for 1884. Edited by Samuel B. Hoppin, M.D. 12mo. pp. 205. Philadelphia: P. Blakiston, Son & Co., 1884.

This conveniently arranged volume forms an excellent and accurate local medical directory. The collateral information, however, is rather meagre. The editor would have increased the usefulness of the book if he had given fuller information concerning the organization of, and rules governing admissions to, the hospitals, dispensaries, and other charitable institutions; and the value of the volume would have been also enhanced, without greatly increasing its bulk, by extending the directory to the whole State, as well as to the adjacent towns in New Jersey and Delaware.

SOCIETY PROCEEDINGS.

PHILADELPHIA NEUROLOGICAL SOCIETY.

Stated Meeting, February 25, 1884.

The Vice-President, Charles K. Mills, M.D., in the Chair.

Dr. Mills read a paper on

THE MCGINNIS CASE,

in which he summarized the facts indicating the insanity of McGinnis as follows: A bad family history; evidences of the monomaniacal character, as shown by a study of his life and present condition; the existence of a delusional state, and even of special delusions of a depressive and persecutory type; the presence of hallucinations of hearing and sight, the former being connected largely with persecutive ideas; some manifestations of religious monomania; a history of alcoholism, and the fact that his chief delusion (marital infidelity) was one often found in chronic alcoholic insanity.

Dr. Lambert Ott then reported a

CASE OF UNILATERAL SPASM, HEMIPLEGIA, AND APHASIA, FOLLOWING MEASLES IN A CHILD.

Boy, aged twenty-eight months, healthy and intelligent, talked well for one of his age. April 2d, he had a mild attack of mumps, and seven days later a well-defined but mild attack of measles. On the tenth day, he was well and laughing and playing in bed, but instead of the dull yellowish stains which remain after the papules of measles have faded, his skin was dotted with spots of a purplish hue. The same morning his mother

noticed a twitching of the muscles of the right eye and right side of face, and soon after similar movements of the right arm and leg. He remained conscious during the spasm, but was unable to speak. In an hour, the leg ceased to move, and was paralyzed. Half an hour later the arm-jerk stopped, and the limb lay powerless; the face movements continued only a few minutes longer, when the side of face was observed to be paralyzed. While the right-sided convulsive seizure was going on, the left arm and leg were affected with choreic movements, which subsided soon after right-sided paralysis was manifest.

Two hours after the first appearance of the spasm, the following condition was noted: Ptosis of right eye; no change in pupils, and no disturbance in movements of eyeballs. When he cried the right side of the forehead remained smooth, while the left was markedly corrugated; no paralysis of tongue, but complete aphasia. Motion in the right arm and leg completely paralyzed, sensation partially. He was conscious and drank water with very little difficulty. The left side of the body showed no disturbance of sensation or motion, except occasional choreic twitching. The dread the child had of strangers prevented an examination of the heart. Temperature 101°; pulse 120; respiration 20, and very irregular. Some bronchial catarrh.

Second day, temp. 102°, pulse 130, resp. 40; no vomiting; intelligence remained good; tongue dry; passed water and feces involuntarily. During the next six days his fever remained high, cough increased, and evidences of catarrhal pneumonia developed.

About the ninth day attention was called to a bulging of the right side of the chest, resembling the deformity produced by a large pleuritic effusion, with a marked lateral curvature of the spine, the convexity being toward the right side. Percussion of the lung of this side elicited hyper-resonance, and auscultation, normal breathing with prolonged expiration. The chest deformity was apparently due to contraction of the muscles of the left side. He had conjunctivitis of right eye and dribbling of saliva from the right angle of the mouth. Was very irritable, and often carried his hand to his head and moaned. Urine normal. The choreic movements of left side returned, but were not so marked.

In the second week the muscles of the face began to regain power. In the third week there was no marked change, except a peculiar swelling and tenseness of the paralyzed leg, which persisted four days and suddenly disappeared during one night; the next morning the leg was very flabby. Electro-muscular contractility was fair. In the latter part of the third week his head was drawn to the paralyzed side, the chin pointing to the left, showing the peculiar influence of the healthy sterno-mastoid and other neck muscles. The muscles of the right side of the neck were flabby; those of the left side were hard and tense. Lifting the head would place it erect, but when unsupported, would fall into its former position. In the fourth week movements were noticed in the arm, and in the fifth week the leg began to regain power. He was now, for the first time, using a few monosyllables, as *ma*, *pa*, etc. In the fourth month he walked fairly; used a few more simple words. In the sixth month, his general health was good, and he was talking more. His gait was fair, but he was unable to run. There existed a marked weakness of the flexor and extensor muscles of the anterior part of the right leg and of the extensor muscles of the right arm.

Dr. Ott regarded the case as one of embolism of the left middle cerebral artery, obstructing the first branch, called the frontal-external and inferior, which supplies the third frontal convolution; also the second and third branches, called respectively the anterior parietal of Duret, or the artery of the ascending frontal convolution of Charcot, and the posterior parietal artery, or the artery of the ascending parietal convolution of Charcot. These latter two branches supply the motor centres of the extremities (Ferrier). The fourth branch, which supplies the angular gyrus, was probably not obstructed, as vision remained apparently unimpaired. The motor centre of the facial muscles occupies a region in close proximity to that of the extremities, which is also supplied by branches of the middle cerebral artery.

The marked peculiarities in the case are as follows:

1. The age of the patient. 2. No loss of consciousness, which Hamilton says is the exception. 3. The disturbance of conformity of the chest, on the ninth day after the spasm. 4. The falling of the head to the paralyzed side twenty days after the spasm. Whenever he had a good night's rest, he was able to hold his head erect for two hours; after that time it lay to one side.

The order of recovery of the paralyzed parts was the reverse of the attack, and was as follows: the face, neck, and chest showed the first signs simultaneously, then the upper extremity, and next the lower extremity. When considerable power had been regained, quite noticeable yet was the weakness of the extensor muscles of the forearm, which gave the hand the peculiar position that resembles the wrist-drop of lead palsy.

Most interesting of all was the occurrence of aphasia. Here was an active little boy, who was suddenly stricken with unilateral spasm, followed by hemiplegia and a total loss of the power of speech. His intelligence did not wane one whit during the whole trouble, but it seemed as if he had to learn to talk over again. At no time did he misapply a word—as calling a chair a table. When once he knew a word and its application he always used it afterward. At this date (nine months after the attack) his speech is disconnected. If he desires to express a thought, he can make a good beginning, but is unable to finish. For instance, he wants to use the sentence, "Katie, get my hat in the other room!" he can only say, "Katie, get my hat ——," for the rest of the sentence he uses signs. His being unable to finish the sentence is not that he does not know the word "room," for, when used otherwise, he has no trouble in recalling it. When he uses three or four words in succession, his speech powers seem at an end.

DR. FRANCIS DERCUM said that he was inclined to regard the case as more likely to be one of hemorrhage than of embolism. It is well known that the miliary aneurisms described by Charcot and others occur sometimes in the very young; therefore, one of the conditions which lead to hemorrhage may be present in infancy. The absence of valvular disease of the heart was also against the idea of embolism. He thought that the symptoms presented by the case indicated a lesion of the internal capsule and basal ganglia, rather than of the convolutions. He referred to the more frequent

occurrence of hemorrhage in this region, and also to the wide extent of cortex that would have been required to be involved in order to explain the phenomena.

DR. MILLS agreed with Dr. Dercum that, from the history of the case, the absence of recognized heart lesions, and the age of the patient, the case was probably one of hemorrhage. He believed, however, that some of the facts indicated a cortical lesion. One of these was the existence of choreic movements on the side opposite that which was paralyzed. According to Duret, when irritative lesions of the cortex occur, they produce not only spasm on the opposite side of the body, but also may cause contraction or spasm on the same side, the result being brought about through irritation of the sensory nerves of the dura mater, which irritation is conveyed to the bulbo-medullary centres.

Dr. Mills referred to the completeness of the paralysis, as a matter of great interest in connection with the views of Broadbent as to the communication by commissural channels of those parts of the central nervous system which preside over movements of the two sides of the body which are associated.

DR. DERCUM said that the occurrence of choreic movement on the side of the lesion could be as well explained by the transmission of irritation by the commissural channels of the brain, as by the views of Duret.

DR. OTT closed the discussion, and said that in favor of the embolism view was the sudden appearance of the attack, and the symptoms which usually follow an embolus in the left middle cerebral artery. In favor of the view of cerebral hemorrhage was the disorganized condition of the blood, the result of measles, predisposing to such an occurrence.

DR. CHARLES K. MILLS then read a

NOTE ON THE USE OF NERVE PRESSURE FOR THE RELIEF OF HYSTERICAL CONTRACTURE.

In three cases he had resorted to strong presssure, applied, by means of the thumb or fingers, to the trunk of the nerve supplying the muscles affected by the spasm in contracture; in a case of hysterical spasmodic torticollis, and in one of hysterical contracture of the wrist and hand, the condition passed away, and remained relieved; in a case of long-standing contracture at the knees, under the effects of pressure on the sciatics the spasm disappeared, but recurred. The procedure was simple, and had value, both as a means of diagnosis and treatment. Whether the result was produced by mental effect, by causing a temporary paresis, or by the pain, he was not prepared to say.

DR. WHARTON SINKLER spoke of having used the method unsuccessfully in a case of facial spasm, which was not, however, hysterical in character.

Stated Meeting, March 24, 1884.

THE PRESIDENT, S. WEIR MITCHELL, M.D., IN THE CHAIR.

DR. MITCHELL, on taking the Chair, made some introductory remarks on

THE OBJECTS AND DUTIES OF A NEUROLOGICAL SOCIETY.

DR. SINKLER presented a patient suffering from

SPINAL ACCESSORY SPASM.

Anna B. K., aged forty-one, single. Has never enjoyed very good health, but has had no special illness. She has had neuralgic headaches for several years, and about three years ago had rheumatism in the left shoulder. In the spring of 1882 she noticed that, while sitting sewing, her head would turn toward the right shoulder. She could control the movement at first, if she directed her attention to it, but it soon began to be worse, and less under the influence of the will. In June or July, 1882, she became unable to restrain the movements. There was no pain in the neck or head, but she became nervous and irritable. There was a sense of discomfort on the top of her head. The use of her eyes seemed to make the movements more troublesome. Her general health has been fairly good, the appetite poor, and she has worried greatly. She was under Dr. Sinkler's care, at the Infirmary for Nervous Diseases, for several weeks in the spring of 1883, and various remedies were used. Galvanism and static electricity were faithfully applied, as well as massage. Hypodermics of atropia were given in the muscle affected, and the bromides and gelsemium were administered. There was no benefit apparent from the treatment.

She was readmitted a few days ago, and her present condition is as follows: She usually sits resting the right side of the face against her hand, to check the movements. The head is rotated to the right every few seconds, and turns more frequently if she is excited or nervous. The chin is turned strongly to the right, and the head is inclined slightly in the same direction. The head is not drawn back. After being held in this position for about two seconds, the spasm relaxes and the head becomes straight. She can keep the head quiet by resting it against some object, and sometimes will rest her head against the wall for this purpose. The left sterno-cleido-mastoid muscle is markedly hypertrophied, and is tender to handle. Pressure over the spinal accessory nerve does not arrest the spasm; it rather brings it on. There is pain at the insertion of the right sterno-mastoid muscle, but none in the left muscle. No contraction takes place in the trapezius muscle, and it is not hypertrophied. The voice is unchanged and there is no laryngeal spasm. The urine contains neither albumen nor sugar. The optic disks are nearly or quite normal. Vision R. $\frac{20}{XXX}$ to $\frac{20}{XL}$. She is nervous and inclined to be hysterical.

DR. DERCUM mentioned a case which was relieved by nitrite of amyl. He said, however, that the case was specific in nature. Iodide of potassium was afterwards given, with satisfactory results.

DR. MITCHELL believed that gelsemium, in exceedingly large doses, was the best remedy for such cases.

DR. A. J. PARKER made some remarks on

THE PRIMITIVE FISSURES OF THE FŒTAL BRAIN.

These fissures appear very early in fœtal life. He did not believe, with some, that they were due to hardening agents, as alcohol and chloride of zinc. He found that these fissures had certain mathematical relations to the brain itself. He regarded them as due to pressure, just as brain flexure is due to pressure. The brain grows under pressure; it tends to grow more rapidly than the skull. Fissures represent retarded growth.

THE PRESIDENT invited DR. GUY HINSDALE to exhibit some mounted specimens showing

THE LESIONS OF SNAKE VENOM.

The specimens were obtained in the experimental laboratory of Drs. Mitchell and Reichert, in the University of Pennsylvania, and illustrated the ecchymoses seen in the lungs of rabbits into whose jugular veins venom had been injected. The appearances are striking, the blotches of extravasation being in marked contrast with the surrounding lung tissue. The colors have been preserved by filling the large cells with a fluid composed as follows:

Glycerine, ...	Oss.
Dense solution of gum Arabic, . . .	Oj.
Saturated solution of acetate of potash, .	Oiss.

The cells are made by cementing to a square piece of plate glass a rubber ring, five inches high and five broad, covering the cell, when filled with the fluid, with a round cover-glass. These cells are four inches in diameter. The cement used is known as "Van Stan's Stratena," and being made with acetic acid, is not affected by the fluid of the cell. Before the rubber ring is fastened to the glass a triangular cork is cut in it, at two places, so that if the fluid becomes discolored, as in mounting specimens too quickly, the original fluid may be drained away and fresh fluid supplied. Large hypodermic needles and a syringe are of use in this operation. Air bubbles may also be removed in this way. The specimens exhibited had been mounted for one month, and they are apparently as fresh as ever.

The eight specimens exhibited the lesions of pure venom of the rattlesnake, the lesions of the three globulins, and the peptone which composes the poison.

THE MEDICAL SOCIETY OF THE STATE OF TENNESSEE.

Annual Meeting, held at Chattanooga, April 8 and 9, 1884.

(Specially reported for THE MEDICAL NEWS.)

THE fifty-first annual meeting of this Society was held at Chattanooga, and was a success, both in regard to the value of the papers read and the character of the representation.

APRIL 8TH, FIRST DAY. MORNING SESSION.

The Society met at the Hall of the Iron and Coal Association, at 11 A.M., and was called to order by THE PRESIDENT, DR. A. B. TADLOCK, of Knoxville; he appointed as a *Committee on Credentials*, Dr. B. B. Lenoir, Dr. W. F. Glenn, and Dr. D. D. Saunders.

Hon. Hugh Whiteside, Mayor of Chattanooga, then delivered an *Address of Welcome*.

PRESIDENT'S ADDRESS.

DR. A. B. TADLOCK then read his address, in which he ably discussed the general bearings of medicine and its relationship to the public. The necessity for legislation to prevent incompetent practitioners was considered, and it was stated that thirty-three of the States had such laws, whilst Tennessee had none.

AFTERNOON SESSION.

The Society was called to order at 2 P.M. On motion the President and Secretary were instructed to send greetings by telegram to the State Medical Association of Alabama, now in session at Selma.

DR. MASTERS, of Knoxville, then read a paper on *The Hygiene of the Eye*.

SECRETARY'S REPORT.

DR. C. C. FITE, of Nashville, then read his report, in which he called attention to the fact that this State was an asylum for travelling quacks. Most of our sister States have, by requiring diplomas and by strict examinations, shut out this horde of vampires, and so they are fattening on our people. We are maintaining our reputation for hospitality, and open wide our doors and welcome them. We, as a profession, he said, ask no protection; we ask no class legislation in our behalf, but for the ignorant masses we should demand protection of our law-makers, and if we unite our efforts we can do it almost without serious opposition.

The report was received and approved.

LICENSE TO PRACTISE.

DR. SAUNDERS moved that a committee be appointed to memorialize the Legislature to secure a law requiring registration and license to practise.

DR. GIBBS moved an amendment that the committee to be appointed prepare a bill, after comparison of all laws on the subject that are obtainable, and that this bill, so prepared, be discussed at an adjourned meeting to be held at Nashville on the first Tuesday in October.

DR. J. BERRIEN LINDSLEY spoke in favor of postponing action, and was in favor of the better organization of the profession in Tennessee.

Dr. Saunders's motion was then carried, after the amendment had been tabled.

Upon motion it was decided that the committee report to-morrow what plans they would pursue, and the following committee was appointed by the President:

Drs. D. D. Saunders, W. W. Taylor, Memphis; Drs. J. H. Van Deman, H. L. McReynolds, Chattanooga; Dr. R. F. Evans, Shelbyville; Dr. W. F. Clary, Bellbuckle; Dr. J. F. Grant, Nashville.

THE TREASURER, DR. ROBERTS, then made his report, which was referred to an Auditing Committee.

THE COMMITTEE ON CHANGES IN THE CONSTITUTION

then reported the results of their deliberations, and the afternoon session was devoted to its consideration.

The Constitution as amended was adopted. The most important change was one requiring five dollars as an initiation fee; two dollars as annual dues from members present at a meeting, and one dollar from the members absent, this entitling them to the *Transactions*.

The Board of Censors was abolished, and a Judicial Council, to be composed of the Ex-Presidents, was established.

APRIL 9TH, SECOND DAY. MORNING SESSION.

Papers were read by Drs. M. Davis, of Knoxville; H. Berlin, of Chattanooga; J. G. Sinclair, of Nashville; R. F. Evans, of Shelbyville; J. Blankenship, and Rathmell, of Chattanooga; A. J. Swaney, of Castalian Springs; W. M. Vertrees, of Nashville; and S. T. Hardison, of Lewisburg.

A telegram of thanks for greeting sent was received from the Alabama Medical Association.

AFTERNOON SESSION.

Dr. G. A. Baxter, of Chattanooga, being called upon by the Society, read a paper on *Uncomplicated Spinal Shocks*.

Dr. Glenn made some remarks upon *The McDade Treatment of Syphilis*, affirming that in his own large experience, and the Marine-Hospital experience of Dr. Douglass, in Nashville, it was a complete failure.

Dr. Saunders confirmed Dr. Glenn's conclusion.

STATE BOARD OF HEALTH.

Dr. J. B. Lindsley, President of the State Board of Health, read a communication from the State Board of Health upon the subject of vital statistics.

Dr. W. T. Hope offered the following motion: "*Resolved*, That the President appoint a committee of five on the State Board of Health, whose special duty it shall be to aid in the passage by the next General Assembly of a satisfactory law upon vital statistics." Carried.

ELECTION OF OFFICERS.

Dr. Hope nominated Dr. D. D. Saunders, of Memphis, for *President*, and he was elected by acclamation.

Dr. A. J. Swaney, of Middle Tennessee; Dr. W. T. Hope, of East Tennessee; and Dr. T. J. Reid, of West Tennessee, were elected *Vice-Presidents*.

A motion to proceed to the election of a *Secretary* was laid upon the table, as the Society was well pleased with its present Secretary, Dr. Fite. The Secretary having declined a reëlection, the Society retains him by having no one elected in his stead.

Dr. Deering J. Roberts was elected *Treasurer*.

EVENING SESSION.

THE COMMITTEE ON MEMORIALS TO THE LEGISLATURE presented the following:

To the Honorable Legislature of the State of Tennessee.

We, a committee appointed by the Tennessee Medical Society, at its last meeting at Chattanooga on April 8, 1884, beg leave to state that, from our personal knowledge, the people of this State, which you have the honor to represent, are being imposed upon in body and person, and in many instances permanently injured in health, and even killed, by ignorant and unauthorized persons who call themselves doctors, and who have no diplomas from recognized medical schools or certificates from authorized medical boards. We deem it our duty to make you conversant with these facts, that you may, as the regular and proper guardians of the peace, happiness, and lives of the people, take such legislative action as may protect your people from this source. So far as the regular profession of medicine is concerned, we wish you to understand that we ask your action not for ourselves, but in behalf of your own people, leaving us to take care of ourselves, which we claim to be able to do.

We would most respectfully suggest in the accomplishment of the above object that you may partially effect it by passing an act which prohibits the collection of medical fees by any other than a similarly legalized physician.

On motion, the report of the committee was received, and the committee continued.

THE COMMITTEE ON VITAL STATISTICS was appointed, as follows, at the request of the State Board of Health: W. T. Hope, Chattanooga; F. L. Sim, Memphis; R. Cheatham, Nashville; J. B. Murfree, Murfreesboro; J. S. Nowlin, Nashville, Chairman.

The Judicial Committee reported that the name of Dr. R. J. Hoyle, of Farmington, Tenn., be

DROPPED FROM THE ROLL OF MEMBERSHIP

on account of irregular practices. Dr. Hoyle was expelled, and the Secretary was instructed so to notify him.

Dr. W. W. Taylor introduced the following resolution in reference to

COUNTY MEDICAL ORGANIZATION:

Resolved, That a committee be appointed on county medical organization, to consist of three members, one from each section of the State. Adopted.

Drs. H. L. McReynolds, of Chattanooga; A. J. Swaney, of Castalian Springs, and W. W. Taylor, Chairman, of Memphis, were appointed the committee.

SIMS MONUMENT FUND.

The following resolution of Dr. P. D. Sims was then adopted:

Resolved, That the Tennessee State Medical Society appropriate to the Marion Sims Monumental Fund the sum of fifty dollars, and that the Treasurer of the Society be and he is hereby instructed to forward from the fund of the Society this amount to Dr. Maury, of Memphis, the custodian of said fund in Tennessee.

The following were appointed by the President

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION:

Drs. Duncan Eve, of Nashville; W. F. Glenn, of Nashville; C. C. Fite, of Nashville; J. B. Lindsley, of Nashville; R. A. Hardin, of Savannah; W. A. H. Coop, of Savannah; J. G. Sinclair, of Nashville; G. B. Thornton, of Memphis; D. D. Saunders, of Memphis; A. J. Swaney, of Castalian Springs; R. F. Evans, of Shelbyville; W. T. Briggs, of Nashville; W. R. Townsend, of South Pittsburg; W. M. Vertrees, of Nashville; A. B. Tadlock, of Knoxville; J. H. Van Deman, of Chattanooga; G. A. Baxter, of Chattanooga; W. G. Bogart, of Sweetwater; H. H. Loveman, of Chattanooga.

The Society then adjourned to meet on the second Tuesday in April, 1885, at Nashville.

CORRESPONDENCE.

THE DISCOVERY OF THE SWINE-PLAGUE MICROCOCCUS.

To the Editor of The Medical News.

Sir: In your issue of April 5th is a communication from Dr. Gradle, of Chicago, which contains some rather surprising assertions, coming, as it does, from a man of scientific pretensions, and the author of a work on the "Germ Theory of Disease." As this is neither the first nor the second time that Dr. Detmers and his friends have accused me of injustice and misrepresentation, I propose in this communication to show what grounds these gentlemen have for making such serious charges, and I hope to make the matter so plain that even they may be satisfied. Fortunately, the points at issue are matters of record, and the original evidence

can be consulted by anyone who desires the facts, uncolored by the views of interested parties.

In my article in *Science* (vol. iii. p. 155), I endeavored to give references for all dates and all important statements that were made. If any of these were inexact, I shall be happy to correct them when the error is pointed out; but I cannot accept a general assertion of injustice and untruth as sufficient basis for modifying conclusions that were only given to the public after mature consideration.

Dr. Gradle has made a few definite statements of his own, however, to which I wish to call attention. He admits that micrococci had been described before Detmers' investigations were made; and he might have added that bacilli had also been described, and the disease attributed to them. What evidence there was at the time indicated that the disease was caused by a bacillus? Klein had just announced that this was the case, and had given careful descriptions and drawings of the organism, and a long series of experiments which he considered conclusive.

Detmers, coming immediately after Klein, also asserted that the organism was a bacillus, largely, as he has since informed us (*American Naturalist*, xvi., 1882, p. 198), because of Klein's investigations; but he so completely failed to give any credit to Klein that no one would have surmised from his original reports that there was such a man in existence. It was not until it was found necessary to get rid of the bacillus theory that Klein was referred to at all, and then only to make him responsible for the error.

It is admitted by Dr. Gradle that Dr. Detmers committed "a mistake in the description of, and name given to the parasites." Dr. Gradle does not seem to regard this as a very serious error; but he forgets that the question at issue at that time was as to whether this organism was a bacillus or a micrococcus. Dr. Detmers decided that it was a bacillus, and since it has turned out to be a micrococcus, he is naturally very anxious to have us believe that he meant micrococcus all the time. To explain his mistake it has been necessary to tell us that his lenses were so insufficient that he could not tell a micrococcus chain from a bacillus rod; and yet on the same page with this admission Dr. Gradle has the assurance to assert, what Dr. Detmers has asserted many times before, viz., that Dr. Detmers invariably found a specific kind of bacteria. These gentlemen seem to forget that a lens which is insufficient to discriminate between a micrococcus and a bacillus must fail still more disastrously if the attempt is made to discriminate between the different varieties of micrococci or of bacilli. As a matter of fact, however, I think few microscopists who have worked with Hartnack objectives will be willing to accept the conclusion that these are as imperfect as Dr. Detmers would have us believe. Indeed, Dr. Detmers never hinted at this himself until it became necessary to explain the radical mistake referred to; on the contrary, he went so far as to examine the dew on the grass with this same objective, and asserted most positively that he found in it the specific bacilli which he invariably found in the blood and other material from sick hogs! (Special Report, No. 12, p. 41.) When it is remembered how very difficult it is, how impossible I might say, to recognize many of the different species of bacteria even with the very best objectives that are now made, the absurdity of claiming to do this with a lens under which a micrococcus chain looked like a bacillus rod, becomes very striking.

Further on, Dr. Gradle says, "The error in the botanical description was hence corrected the following year (Special Report No. 22, p. 60)." Referring to this report, I beg the reader to recall the drawings, which are intended to be faithful representations of what he saw. Take figures 1, 2, 3, 4, 6, 10, 11, 12, 15, 16, 17, and tell us how in the world the rod-shaped objects shown in them can be classed as micrococci? Take central Fig. 3, in the first third of the plate, or the large central unnumbered figure in the middle of the plate, each representing the supposed bacteria of swine-plague, and if the organisms shown in these are not typical bacilli, then I would like Dr. Gradle to explain what they are, and to give some authority for naming them differently. If they were considered to be micrococci, why do we find under nearly every drawing the words bacilli or rod-shaped schizomycetes? Surely micrococci are not rod-shaped. It is to be remembered that at the time this report was made, Dr. Detmers possessed a Tolles lens, and that, consequently, the defective-objective excuse no longer applies. In this connection, I beg to call attention to a sentence on page 59, Special Report No. 22, which both Detmers and Gradle appear to have overlooked. It reads as follows: "The objectives used were a one-ninth imm., or No. 8 Hartnack [the same objective used in the investigations of the preceding year, D. E. S.], a one-sixteenth imm., or No. 10 Hartnack, and a one-tenth oil or balsam index imm., of Tolles, of recent make and superior quality. The results, in all cases, have been essentially the same."

We will now briefly consider the evidence which, it is claimed, Dr. Detmers furnished in his first report to show that swine-plague was caused by micrococci. Of course we do not forget in the meantime that the bacteria found were then called bacilli, and described as rod-shaped; and some of my readers will doubtless wonder how Dr. Gradle can now be so sure that they were micrococci; it is a difficulty which he can doubtless explain, but which is rather more than I care to grapple with. Dr. Gradle endorses these experiments in the following unqualified terms, to which I call special attention, because I want to show how good a judge he is of this class of investigations, of which he seems to be making a specialty: "Since all precautions necessary to render such experiments faultless were fully carried out, no flaw can be detected in Detmers' demonstration of the bacterial origin of the disease." (Dr. Gradle's letter in THE MEDICAL NEWS, p. 401.)

The first experiment was a cultivation of the germs, and I think the reader will be interested in knowing how this was done. "On September 23d," we are told, "Prof. Burrill charged two drachms of fresh cow-milk with a mere speck, smaller than a pin's head, of a decaying morbid growth, or ulcerous tumor of the cæcum of pig No. 5, and kept the vial well closed, at a temperature of 92° F." (Special Report No. 12, p. 37.)

Most investigators, when they attempt to make a cultivation, use some precautions to obtain their virus in a condition of purity. In this case a decaying, ulcerous tumor of the intestine, which any one of experience knows would be certainly contaminated with the bac-

teria of putrefaction, was the material chosen. Suppose, for the sake of argument, it was originally free from such contamination, can any one imagine how it could be carried to the laboratory and placed in a cultivation apparatus without coming in contact with the numberless germs found everywhere in the air? Then comes the cultivation liquid, fresh cow-milk. No attempt to sterilize—no means of getting rid of the germs which fall into this liquid during the process of milking, or which always adhere to the vessels into which it is received. What wonderful precautions! Then the cultivation apparatus—a vial! Surely no comments can add to the force of the author's own language. This virus was not carried to a second cultivation, but a single animal was inoculated from the first. Now, admitting that the pig inoculated contracted swine-plague from this milk, what is there to show that the virus multiplied? Is it not just as likely that a simple dilution to that extent would have produced the same effect? I have shown that chicken-cholera virus might be diluted to seventy thousand times its volume and still be active. and Davaine long before demonstrated the activity of septicæmic virus when diluted with a hundred million or even a trillion times its volume. Is there anything unreasonable in concluding that these two drachms of milk might have become virulent by the simple dilution of the added virus?

This milk contained bacilli figured as distinctly as it is possible to draw such organisms, and which any one can see were neither "serrated" nor "moniliform" by examining drawings 3 and 4 under Section 3 of the plate accompanying Dr. Detmers's report in Special Report No. 12.

The second experiment is even more remarkable in some respects. The idea was to remove the bacteria by filtration from the virus and show that the liquid freed from these was harmless. To this end blood serum from the diseased lungs of a pig was filtered through eight filters on October 8. It still contained "bacillus germs." October 9, the filtrate was filtered again through two filters. October 14, the same filtrate was filtered through four papers. As no bacteria could be found in the filtrate after the last filtration, the liquid was used for the inoculation of one pig. No disease resulting, it was concluded that the active principle of the virus was the bacteria which in this case had been filtered out.

Now a certain number of hogs are insusceptible to cholera just as a certain proportion of other animals and men are insusceptible to most other contagia. Suppose the single pig used for this experiment had been one of the insusceptible ones, what would the experiment have proved? Again, Dr. Detmers tells us that "In all animal substances the bacilli and their germs are destroyed, or at least disappear, as soon as putrefaction sets in." (Special Report, No. 22, p. 30.) The serum in the experiment in question was preserved in a bottle for seven days, being repeatedly exposed to the air in the meantime during filtration. And as this occurred during the warm weather of the second week in October, is it out of reason to ask if in this case putrefaction might not have had something to do with the loss of virulence? I know from experience that this virus frequently loses its activity from putrefaction in less than a third of the time which it was kept in this instance.

These are the experiments which Dr. Gradle so confidently refers to as having been made with all necessary precautions, and to be without flaw! How either of these experiments indicate that the germ is a micrococcus rather than a bacillus is a question which I leave for Dr. Gradle to clear up; it certainly is beyond the reach of ordinary mortals.

Another assertion is as follows: "The description of the characteristic mode of grouping, and the drawing of the parasites in the first two reports, as well as in the later one of 1880, show that Dr. Detmers really dealt with the same micro-organisms in all these instances." This statement is diametrically opposed to the facts. The bacilli figured in Dr. Detmers' first two reports are no more like the micrococci which he described later than a bat is like a ball, nor is there anything characteristic in any of the groupings. All of Dr. Detmers' drawings and conclusions show unmistakably that his material was contaminated with septic bacteria of various kinds. The micrococci of swine-plague are motionless micrococci, with nothing in their form, size, or grouping to distinguish them from some other varieties of micrococci. And when Dr. Detmers tells us that they develop into a dumb-bell organism with a flagellum, and that they swim about the field with an independent motion, we cannot avoid thinking of bacterium termo. When he goes further, and tells us that he has always seen rods, and even helobacteria, and believes his micrococci develop into these, I am perfectly satisfied in my mind that his virus was not pure. If Dr. Gradle wishes to advocate Detmers' views—that a micrococcus may exist in all the different forms usually ascribed to the various genera of bacteria, excepting the single one of spirillum, he is at perfect liberty to do so; but surely those of us who know how ridiculous such views are in the light of modern science, have an equal right to reject them.

The question, however, is not whether Dr. Detmers saw and described bacilli or micrococci—both of these forms had been described and figured before his investigations. His only claims to originality can be in proving that one of these organisms is capable of producing the disease. This he never did, nor has he ever made any experiments which throw the least light on this contested question. His methods of cultivation are insufficient from every standpoint, and cannot, by any ingenuity, be made to touch the points claimed in such exaggerated language by Dr. Gradle. In the very last paper which Dr. Detmers has written on the subject, he expresses the view which he has clung to from the first —that the micrococci, the swimming, dumb-bell-shaped organisms, the rods, and the helobacteria, are all one and the same organism, in different stages of existence. (*American Naturalist*, March and April, 1882.) A single pure cultivation would have revealed to him this radical mistake; and the fact that he still holds this error is proof positive that he never made such a cultivation. If, then, he was never able to separate the micrococci from the rod-shaped bacteria—and holding, as he does, that both are one and the same organism he cannot reasonably make such a claim—then it requires no other evidence to show that he could not possibly have proved either the one or the other of these forms to be the real cause of the disease.

D. E. Salmon, D.V.M.

Washington, D. C., April 3, 1884

NEWS ITEMS.

NORTH CAROLINA.

From our Travelling Correspondent.

SHAW UNIVERSITY is situated in Raleigh, N. C., and an account of a recent visit to it may interest your readers. It is one of a dozen similar institutions founded over the South by the American Baptist Home Missionary Society for the education of the negroes. It has an industrial, normal, academic, theological, and medical department, to which a law department will shortly be added. Four hundred and fifty students, of both sexes, and six large buildings, on a campus of twelve acres, attest its success.

The want of colored medical men for their own race has been widely felt in the South, and even the State Legislature has set its seal of approval upon this effort to provide for the want by giving the land upon which one of the two medical buildings stands.

The medical department is only in its second year, and has fourteen students. The Faculty at present consists of three professors, one from Vermont, and the other two, leading practitioners in Raleigh. They have wisely decided that, in view of the limited early education of the negroes, the medical course shall be four years, both to give a thorough graded course, and the opportunity to study Latin and other branches in the academic department.

If the black man is to enter medicine, he must expect just what the white man does—a fair fight and no favors. If inferior in education and skill, he will go to the bottom; if superior, he ought to get to the top. Hence "thoroughness" is the especial aim at Shaw. And the examinations I heard were admirable. One student went through nearly every point in the sphenoid bone with but two or three mistakes; another gave a careful and intelligent account of the histology of bone; and another of the kidney. Altogether, the anatomical examination would have done credit to any of the schools in your own city. The other examinations I attended were in physiology and practice, and were nearly as good as the first.

Clinical facilities are as yet wanting, but it is proposed to build a pavilion ward of twenty beds very soon, and the city has agreed to furnish all the medical supplies needed for it. This will enable students also to have some clinical facilities in the medical specialties, to which the fourth year is entirely given up.

Having begun so lately, the school is almost destitute of library, museum, and other means of illustration, and any of your readers would do a good service by sending contributions to any of these departments. They have some of Auzoux's models, an excellent microscope, and a fair, though limited, chemical equipment.

The faculty is united, progressive, and laborious. The students are intelligent, enthusiastic, and industrious, and in their earnest struggle for an honorable means of self-support, they ought to receive good wishes and a hearty support.

YELLOW FEVER AT HAVANA. — Sanitary Inspector Daniel M. Burgess, U. S. M. H. S., stationed at Havana, reports 502 deaths, from all causes, in that city during the month of March last. Of these 9 were from yellow fever, 6 from typhoid, and 9 from "pernicious" fever. Of the 9 from yellow fever, 7 occurred in the Military Hospital, and 2 among civilians. He says there were 16 cases of yellow fever at the date of his report (April 3); but for the last month it has not been malignant in character, a very large percentage recovering. He adds: "The diagnosis 'pernicious fever' is made in this city very carelessly and loosely, in many cases by the physicians here, and though I have no doubt it usually is intended to convey the idea of a disease of malarial or paludal origin, I am nevertheless confident that not an insignificant proportion of such cases, and particularly deaths, are true yellow fever."

THE UNITED STATES AT THE INTERNATIONAL SANITARY CONGRESS. — Notification has been received by Surgeon-General Hamilton, through the Secretary of the Treasury, that the Secretary of State has designated Prof. C. F. Chandler, of Columbia College, New York City, as Honorary Commissioner of the United States to the International Sanitary Congress, to be held at the Hague, on the 21st–27th of August, 1884.

AMERICAN SURGICAL ASSOCIATION.—The next meeting of the American Surgical Association will be held on April 30th, and May 1st, 2d, and 3d, in the Lecture-Room of the National Museum, Washington.

The following papers will be presented:

Dr. S. D. Gross, Phila.—Wounds of the Intestines.

Dr. Moses Gunn, Chicago—The Philosophy of Manipulation in the Reduction of Hip and Shoulder Dislocations.

Dr. J. Collins Warren, Boston—The Healing of Arteries after Ligature.

Dr. J. C. Hutchison, Brooklyn—Transfusion.

Dr. S. W Gross, Phila.—Gastrostomy, Œsophagostomy, Internal Œsophagotomy, Combined Œsophagotomy, Œsophagectomy, and Retrograde Divulsion in the Treatment of Strictures of the Œsophagus.

Dr. J. W. S. Gouley, New York—Some Points in the Pathology and Surgery of the Prostate.

Dr. David W. Cheever, Boston—Some of the Dangers and Disadvantages of Anæsthetics.

Dr. Basil Norris, Surgeon U. S. Army, Washington—Extirpation of the Tongue.

Dr. C. H. Mastin, Mobile—Prostatic Calculi, Cases and Specimens.

Dr. Henry F. Campbell, Augusta, Ga.—Artificial Respiration in the Sitting Position.

Dr. P. S. Conner, Cincinnati—Traumatic Cephalhydrocele.

Dr. Donald Maclean, Detroit—Clinical Notes.

Dr. J. Ewing Mears, Philadelphia—A Contribution to our Knowledge of the Pathology of Trifacial Neuralgia.

Dr. David Prince, Jacksonville, Ill.—Unsettled Questions in Relation to Injuries to the Head.

Dr. George W. Gay, Boston—Tracheotomy in Croup.

Dr. Stephen Smith, New York—Does the Practice Keep Pace with the Science of Surgery?

Dr. John B. Roberts, Philadelphia—The Localization of Perinephric Inflammation by Means of Chemico-anatomical Study.

Dr. William A. Byrd, Quincy, Ill.—Trephining for Insanity Following a Depressed Fracture of the Skull.

Dr. W. S. Tremaine, Surgeon U. S. Army—Suprapubic Lithotomy.

Dr. L. McLane Tiffany, Baltimore—Ligation of Common Femoral Artery.

Dr. John S. Coleman, Augusta, Ga.—The Multiple Wedge Principle in the Treatment of Organic Strictures of the Urethra.

Dr. W. W. Keen, Philadelphia—A Case of Dermoid Cyst Opening into the Bladder in a Male.

Dr. N. Senn, Milwaukee—Experimental Researches on Cicatrization in Bloodvessels after Ligature.

Dr. John H. Brinton, Philadelphia — Intrauterine Compound Fractures.

Dr. Joseph W. Thompson, Paducah, Ky.—Surgery of the Hand, Especially as Applied to Railroad Injuries.

Dr. John A Comingor, Indianapolis — Anæsthesia and Plaster-of-Paris Bandage in the Treatment of Sciatic Neuralgia.

Dr. B. A. Watson, Jersey City — An Experimental Study of Anæsthetics.

Dr. E. H. Gregory, St. Louis—Subject not announced.

Dr. W. W. Dawson, Cincinnati — Subject not announced.

Dr. Charles B. Nancrede, Philadelphia—Surgical Interference in Cerebral Abscess.

Dr. William T. Briggs, Nashville — Trephining for Epilepsy.

The South Carolina Medical Association will hold its annual meeting at Florence on Thursday, the 22d inst.

The Texas State Medical Association will meet in annual session at Belton on the 22d of April.

The Medico-Chirurgical Faculty of Maryland will hold its annual meeting in Baltimore on Tuesday next. The annual address will be delivered by Dr. William Pepper, on "Some Practical Views on Dietetics in Disease," on Wednesday at 1 P.M.

Canada Medical Association.—The next meeting of this Association will be held in Montreal on August 25th, 26th, and 27th; and the meeting of the British Association for the Advancement of Science begins in that city on August 27th.

The Kansas City Medical College held its fifteenth annual commencement on March 5, and the degree of M.D. was conferred on seventeen candidates.

The University of Kansas City held the third annual commencement of its medical department on March 13, and the medical degree was conferred on fourteen candidates.

The Foot and Mouth Disease in Kansas.— Dr. D. E. Salmon, of the U. S. Department of Agriculture (Veterinary Division), reports that, from personal examination in Kansas, he saw nothing to indicate foot and mouth disease. The feet were separating—sometimes half way between fetlock and hock—as a consequence of dry gangrene. The mouth symptoms were very slight or entirely absent; when present they were of the nature of erosions—he saw no vesicles. He attributed the disease to ergot, of which there was a large quantity in the hay. This conclusion is contested by some, and experiments are now under way to show whether or not it is contagious.

International Health Exhibition, London, 1884.—A somewhat novel feature in connection with the exhibition this year will be the establishment of a library and reading room, a home for which the executive council have assigned in a large double room in the Albert Hall, overlooking the conservatory. Steps have been taken to secure a representative collection of works on vital statistics; of reports and regulations relating to public health; of regulations with reference to injurious trades and of works thereon; and of reports, statistics, and other works on the science of education. Foreign powers have been invited to lend their coöperation in this effort to create an international library of works of reference bearing on the two divisions of the exhibition, and several responses have already been received. India and the colonies have also been asked to contribute towards the same end. Publishers and authors have likewise been invited to forward copies of their works. In addition to the library of reference, there will be a reading room, to which the current numbers of periodical publications of a sanitary or educational character will be admitted. All books and periodicals sent to the library and reading room will, under certain regulations, be arranged for the use of visitors, and not merely for exhibition. The books will be submitted to the jurors, and a full catalogue will be issued. All parcels for the library and reading room should be addressed, carriage paid, to the Secretary of the Library Sub-Committee, Royal Albert Hall, London, S. W.

Health in Michigan.—Reports to the State Board of Health for the week ending April 5, 1884, indicate that inflammation of the bowels, bronchitis, and diarrhœa have increased, that pneumonia has considerably decreased, and that scarlet fever, inflammation of the brain, and measles have decreased in area of prevalence.

Compared with the average for the month of March in the preceding six years, cerebro-spinal meningitis was more prevalent, and pneumonia, rheumatism, and remittent fever less prevalent in March, 1884.

Including reports by regular observers and others, diphtheria was reported present during the week ending April 5, and since, at ten places, scarlet fever at seventeen places, and measles at eight places.

Obituary Record.—Pliny Adams Jewett, of New Haven, died of pneumonia, in Providence, on April 10th, aged seventy-two. He received his literary education in Trinity College, and his medical education at Yale College and in Paris. After studying in Paris he settled in New Haven. Subsequently he resided in Aiken, S. C., for two years, and then returned to New Haven.

Dr. Jewett made a specialty of surgery, and for thirty-five years has been attending surgeon at the New Haven Hospital. In 1856 he was elected Professor of Obstetrics at Yale College, and held this position for twelve years. During the War of the Rebellion he was a surgeon of volunteers, and was afterwards promoted to a colonelcy for meritorious service; he organized and had

charge of Knight's U. S. Army General Hospital, at New Haven, from 1862 to 1865.

NOTES AND QUERIES.

A YEAR'S WORK IN OVARIOTOMY.

To the Editor of THE MEDICAL NEWS.

SIR: In your last issue Mr. Lawson Tait says "that Professor Goodell is right in pointing out that Dr. Sutton's words are likely to give rise to a misunderstanding." Again, he says: "In order that the nature of my work may not be misunderstood, kindly allow me to say that last year I removed eighty-two tumors of the ovary and parovary," etc. Dr. Goodell made use of my remarks, before the Gynecological Society, in reference to Mr. Tait. I said, "so far as Mr. Tait is concerned, he does not remove many large tumors, those which weigh from sixty to sixty-five pounds with extensive adhesions." Such was the fact, which I observed in Mr. Tait's work in the summer of 1882. Mr. Tait cites his work in 1883. Of this work he says: "Two of these were very small dermoid cysts. The remaining eighty had an average weight of about twenty-seven pounds, the largest being about one hundred and twenty pounds, and the smallest eleven pounds."

Eighty tumors averaging twenty-seven pounds give a total of twenty-one hundred and sixty pounds; now if nine of these eighty tumors weighed sixty-five pounds each, and you add one tumor of one hundred and twenty pounds weight, you have seven hundred and five pounds to deduct from the aggregate weight of twenty-one hundred and sixty pounds, which he admits; this gives you the aggregate weight of the remaining seventy tumors at fourteen hundred and fifty-five pounds, an average of about twenty pounds to the tumor. Certainly, a class of twenty pound ovarian and parovarian tumors is rarely a bad one. But unless at least ten of these cases exceeded sixty pounds, my remark still holds good, viz., that *he does not remove many large tumors, those which weigh from sixty to sixty-five pounds with extensive adhesions.* I mean no disparagement of his work, its results are superb.

Very respectfully yours,

R. S. SUTTON, M.D.

PITTSBURG, April 15, 1884.

LIME INHALATIONS IN CROUP.

To the Editor of THE MEDICAL NEWS.

SIR: *Apropos* of lime inhalations in membranous croup, etc., a subject now being discussed in your columns, it might be well to call the attention of your readers to the following, from p. 549 of *Diseases of Children*, by J. Lewis Smith, M.D., of New York, fifth edition, 1881:

"It has long been known that the vapor of slaked lime is an active solvent of pseudo-membranes, but the manner in which it has frequently been employed is inefficient. Many physicians place the unslaked lime in pans or dishes, add water to it, and place the child so that it inhales the vapor as it rises. This is little more than the inhalation of steam, as anyone may satisfy himself by holding a mirror or pane of glass over it, when he will perceive only a very slight deposit of lime on the glass. The proper way to employ it is with the atomizer," etc.

I think Prof. Smith deserves priority in this matter over some more recent writers. I have had no experience with lime in croup, but can attest the efficacy of a two per cent. solution of liquor potassæ, applied by means of the steam atomizer, having used it in several cases with most gratifying results.

Respectfully,

G. E. COWLEY, M.D.

GLASSVILLE, Mo., April 9, 1884.

CORRIGENDUM.

IN our issue of last week, page 418, second column, fifth line, for "possible" *read* "impossible."

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 8 TO APRIL 14, 1884.

SMITH, JOSEPH R., *Major and Surgeon.*—Directed to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held in Washington, D. C., on the 6th of May, 1884, and on the adjournment of the Association to return to his proper station (San Antonio, Texas).—*Par. 7, S. O. 81, A. G. O.*, April 8, 1884.

BAILY, JOSEPH C., *Major and Surgeon.*—Leave of absence extended three months.—*By Par. 8, S. O. 83, A. G. O.*, April 10, 1884.

PILCHER, JAMES E., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Camp Poplar River, Montana.—*Par. 2, S. O. 37, Headquarters, Department of Dakota*, April 7, 1884.

WALES, PHILIP G., *First Lieutenant and Assistant Surgeon.*—Ordered to report to the Commanding General Department of the Columbia, for assignment to duty.—*Par. 11, S. O. 84, A. G. O.*, April 11, 1884.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FROM JANUARY 1 TO MARCH 31, 1884.

FESSENDEN, C. S. D., *Surgeon.*—To proceed to Cairo, Illinois, and Memphis, Tennessee, as Inspector, March 5, 1884.

PURVIANCE, GEORGE, *Surgeon.*—Granted leave of absence for thirty days, February 16, 1884.

SMITH, HENRY, *Surgeon.*—To rejoin his station at Norfolk, Virginia, March 7, 1884.

IRWIN, FAIRFAX, *Passed Assistant Surgeon.*—Relieved from duty at Norfolk, Virginia; to assume charge of St. Charles Quarantine Station, March 7, 1884.

CARMICHAEL, D. A., *Assistant Surgeon.*—To report to Surgeon Purviance for examination for promotion, March 5, 1884.

ARMSTRONG, S. T., *Assistant Surgeon.*—To report to Surgeon Fessenden for examination for promotion, March 5, 1884.

BENNETT, B. H., *Assistant Surgeon.*—Leave of absence extended ten days, January 18, 1884.

AMES, R. P. M., *Assistant Surgeon.*—Detailed for temporary duty on relief boat (Ohio River Flood Sufferers), February 16 and March 1, 1884.

DEVAN, S. C., *Assistant Surgeon.*—Upon expiration of leave of absence, to proceed to St. Louis, Missouri, for temporary duty, February 6, 1884.

KALLOCH, P. C., *Assistant Surgeon.*—To proceed to Charlestown, South Carolina, for temporary duty, February 1, 1884.

BEVAN, A. D., *Assistant Surgeon.*—Granted leave of absence for seven days, March 13, 1884.

WASDIN, EUGENE, *Assistant Surgeon.*—Granted leave of absence for fifteen days, March 4, 1884.

BATTLE, K. P., *Assistant Surgeon.*—To proceed to New York, N. Y., for temporary duty, February 4, 1884.

RESIGNATION.

COOKE, H. B., *Passed Assistant Surgeon.*—Resignation accepted by the Secretary of the Treasury, to take effect February 5, 1884. January 31, 1884.

APPOINTMENT.

BATTLE, KEMP P., M.D., of North Carolina, having passed the examination required by the Regulations, was appointed an Assistant Surgeon by the Secretary of the Treasury, February 2, 1884.

PROMOTIONS.

CARMICHAEL, D. A., *Passed Assistant Surgeon.*—Promoted and appointed Passed Assistant Surgeon, by the Secretary of the Treasury, from March 1, 1884. March 18, 1884.

ARMSTRONG, S. T., *Passed Assistant Surgeon.*—Promoted and appointed Passed Assistant Surgeon, by the Secretary of the Treasury, from April 1, 1884. March 28, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIV. SATURDAY, APRIL 26, 1884. NO. 17.

ORIGINAL LECTURES.

CHRONIC NASAL CATARRH.

Two Clinical Lectures,
Delivered at the College of Physicians and Surgeons, New York.

BY GEORGE MOREWOOD LEFFERTS, M.D.,
PROFESSOR OF LARYNGOSCOPY AND DISEASES OF THE THROAT.

LECTURE I.

GENTLEMEN: I propose commencing to-day the consideration of a subject which I know will be of more than passing interest to you. The patients that you see before you will illustrate its various phases; they will be demonstrated in a few moments. My subject is "Nasal Catarrh"—one about which much is written to-day by the profession, much more said by the laity. It is an extensive one, and I cannot hope to treat it exhaustively in the time at my disposal in this course; perhaps it is just as well that I should not attempt to do so. What you most need, as general practitioners, is condensed and reliable information concerning diagnosis, and practical advice in regard to treatment.

I have said that the subject will be of interest to you. We all hear a great deal about "chronic catarrh of the nose," and you will see a good deal of it. Patients who suffer from it, and patients who have not got it, but imagine that they have, will come to you in numbers. You certainly, then, ought to be able to recognize it when present, to exclude it when absent, and, above all, be competent to treat it scientifically and successfully. Let me ask just here, Do general practitioners always recognize it? Do they always examine for it? Are they not too apt, in too many cases, to accept the statement of the patient, make no examination, prescribe a nasal douche and some wash, and allow the patient to disappear, perhaps to excite, in time, a catarrh, where none existed before? Patients will make their own diagnosis—it is common for them to do so—and often come to you for the treatment of that which, perhaps, does not exist; often they will treat themselves, without any advice. The country is flooded with advertisements, pamphlets, and books on the subject of nasal catarrh. The field is a rich one for the quack; "sure cures" multiply rapidly; new remedies are eagerly sought for by the credulous; "catarrh snuffs" crowd the counters of every drug-store; and "nasal douches" are manufactured and sold by the thousand. The quack does not spare the feelings of the patient; he pictures the disease in its most disagreeable aspects; he dwells upon the worst symptoms; he confounds other diseases—syphilis, for instance—with simple catarrh; in short, he frightens.

Your patients, then, well posted in literature of this class, come to you, dreading that the nasal trouble that they have, or, perhaps, have not got, will develop into the worst form of catarrh that they have read about; above all, that it will develop a disagreeable odor. A symptom that they also often dwell upon, regarding it as a sign of the dread disease, is "a constant dropping of mucus in the throat"—an ever-present desire to clear it. Some little mucus they do bring away; often not. Let me warn you here that, in a good percentage of these cases, all this has nothing to do with "nasal catarrh." The patient is probably suffering from a simple, relaxed throat, or a chronic pharyngitis, in one of its forms; perhaps, and most commonly, a relaxed or elongated uvula, and that these, especially the latter, are the matters at fault, *not* the nose. All this you must prevent, they cry to their doctor; they demand treatment at your hands. Now, much of this nonsense you, as sensible medical men, can prevent. But, first, you must yourself know what "nasal catarrh" really is, what forms it appears under, and how to recognize the varieties by their intra-nasal appearances. The day has gone by when all nasal affections can be recklessly and ignorantly classed under the generic name "catarrh," and so treated. What a multitude of sins that word has covered!

The one symptom that patients most fear, and justly so, I have alluded to—the foul smell from the nose; but it is in reality a rare one; it only occurs in the fetid or atrophic form of nasal catarrh, which is by no means so common as the other varieties, and in ozæna, but ozæna has nothing to do with nasal catarrh. Do not forget this: it only occurs in patients who are the victims of syphilis or struma—patients who have syphilitic necrosis of the nasal bones, with a stinking, purulent discharge, a discharge due to the presence of dead bone. The same thing sometimes happens in scrofulous subjects. Under these circumstances, then, you may have the fetid, stinking disease, ozæna; but only under these circumstances. Do not call cases of nasal catarrh, even the fetid form, ozæna; they have pathologically nothing in common. Remember, also, that fetid or atrophic catarrh is, as I have said, unusual; and thus you are able, at once, to reassure your patient in regard to the most dreaded symptom.

I have said this much in order to prove to you the necessity of your learning to recognize the varieties of nasal catarrhal disease; for not alone diagnosis, but, what is equally important, your correct views regarding the questions of prognosis and treatment, will depend upon your acquirement of this knowledge. Some forms of nasal catarrh are curable, others are not. Is there, then, more than one form of "nasal catarrh?" Most certainly; and you will learn to differentiate them. First, acknowledge the fact that they do exist. You will meet with three varieties: 1. Simple chronic rhinitis; and let me say here that I prefer this term rhinitis to the one—"catarrh"—which is so commonly used; 2. Hypertrophic rhinitis; and 3. Atrophic or fetid rhinitis.

Simple chronic rhinitis is, as the name implies, a chronic inflammation of the nasal mucous membrane unattended by structural changes of any moment—its only symptom is an increased discharge of mucus, or, if

it has lasted some time, muco-pus—this discharge is thin and easily removable, there is no interference with the sense of smell, and no obstruction to respiration. The anterior rhinoscopic examination will show you simply congestion of the mucous membrane, the latter flecked here and there by soft, easily removable, slightly yellowish mucus. As far as the amount of free space is concerned, it is normal, there is no thickening or hypertrophy of the membrane. Posteriorly the rhinoscopic mirror will exhibit about the same appearances, except at the vault of the pharynx, where the glandular tissue is large in amount. Swelling of these glands gives a turgid aspect to the parts, and the secretion which covers them in, in part, is thicker and more tenacious—chronic pharyngitis may or may not coexist. Such patients do not, as a rule, consult you; the trouble is too slight, and unless they are morbidly sensitive or easily frightened, they allow the pathological process, through ignorance of possible results, to continue without treatment. Thus week by week, month by month, it continues, until the simple form of rhinitis develops into the second variety, which we term hypertrophic nasal catarrh, or rhinitis. We now have marked structural changes, a proliferation of all the normal elements of the mucous membrane, a true hypertrophy. The whole mucous membrane of the nasal passages, but specially that over the lower turbinated bones, is markedly thickened and relaxed; the plexus of bloodvessels, a true erectile tissue, which underlies the membrane, in the latter locality, becomes enlarged; the glands at the vault of the pharynx participate in the pathological process and likewise hypertrophy. Secretion is excessive, thick and tenacious, showing that the glandular elements of the mucous membrane have not escaped. Such a hypertrophy of tissue of course occludes more or less, perhaps permanently and completely, but more commonly intermittingly and partially, the nasal passages; the patient breathes with difficulty, his voice becomes nasal in character, he experiences much discomfort, and then decides, for the first time, to consult a physician.

Hypertrophic rhinitis, then, will be the form of catarrhal disease of the nose that you will oftenest be called upon to treat. Fortunately, you can give your patient great relief, but of this in one moment. Make now your anterior rhinoscopic inspection. You will see at once that the anterior extremity of the inferior turbinated bone on one, perhaps on both sides of the nose projects far out into the free space of the nasal passage, indeed, may lie against the nasal septum, and thus close the passage, that the mucous membrane covering it is thickened and congested, and hidden more or less by thick, muco-purulent discharge. The thickened membrane over the lower turbinated bone hangs downwards, thus encroaching upon the inferior meatus of the nose. If you touch it with a probe, it indents deeply and recovers itself slowly. The membrane covering the middle turbinated bone and the side of the septum, are affected to a less extent, perhaps not at all. Posteriorly—observe carefully the posterior extremities of both middle and inferior turbinated bones, but specially the latter. The mucous membrane is not only markedly hypertrophied, but has a peculiar rugged appearance; it is thrown into fissures and irregularities, and has a whitish appearance. A veritable tumor is thus formed, characteristic in its appearance and marked in its results, for it closes, by its bulk, more or less of the posterior nasal opening. This closure is also assisted by the thickening that will be seen in the form of an irregular, ovoid tumor upon the side of the septum. At the vault of the pharynx both mucous membrane and glandular tissue are involved, the latter to the greater extent. Thus we see an irregular, nodular tumor, traversed by seams and fissures, presenting a variety of aspects, according to the degree and kind of development, but always occupying and obliterating the normal, rounded, concave cavity of the vault. Chronic pharyngitis, frequently the follicular form, will also be present, and, occasionally, chronic laryngitis.

As a result of this process of intra-nasal hypertrophy, in certain cases following it, when it has lasted some time, or, more rarely, occurring early in the disease, before hypertrophy is far advanced, the third form of rhinitis develops. This we call atrophic or fetid nasal catarrh. I have told you that it is by no means as common as the preceding varieties. It means this: remember that in the hypertrophic form we had in the deeper layers of the tissues a deposition of newly developed connective and elastic tissue. This may cause two results—first, by its mere presence and amount, it may press upon, cause atrophy of, and destruction of function in, the glands and follicles which stud the mucous membrane. It crowds them to death, so to speak. This may occur, as I have said, early in the disease; if later, as it commonly does, the process of atrophy of the mucous membrane, and especially of the glands, has a different explanation; it is now due to the contraction that takes place in the connective and elastic tissue that has been developed in the hypertrophic form of the disease. The more and more firmly this becomes organized as time goes on, the more and more completely does it compress and destroy the function of the secreting glands and follicles, and with them the mucous membrane in which they lie, and the submucous structures, atrophy. Even more, if the process be long continued, the effect of this continued pressure, aided by the pressure of inspissated secretions or crusts, is exerted upon the turbinated bones themselves. Atrophy, interstitial absorption, is set up in them, they become smaller than normal, and the result is shown in the abnormally large, wide, roomy nasal passages, covered by a tense, dry, shining mucous membrane, often with hard crusts of mucus covering it. In these cases you can often look directly through the nasal passage back into the pharynx, so wide is it.

The symptoms that these pathological changes occasion are not as marked as in the hypertrophic form. There is plenty of room through the nose for the respiratory current to pass, hence there is no obstruction to breathing experienced by the patient. The discharge, instead of being profuse, is scanty, and dries into crusts and scales. There is no interference with the *timbré* of the voice. The only symptoms, then, are interference with the sense of smell, as a rule, the atrophic process having extended upwards to the olfactory region, and affected the terminal fibres of the olfactory nerve, and general uneasy sensations, sometimes amounting to pain, with excessive irritability and sensitiveness to atmospheric changes. The rhinoscopic appearances, both anterior and posterior, are sufficiently indicated, in my description of the disease; I will not, therefore, dwell upon them. The posterior wall of the pharynx will be

dry and shining, and without any enlargement of its follicles.

So much for the atrophic form, but I have coupled with this term the one fetid. The latter condition follows the former closely, indeed, is part of it if it has lasted any time, and I see no need, clinically, to make a distinction between the two. Fetor is the direct result of the atrophy, in this way: The secretions are scanty and tenacious, as I have told you, and become more and more so, as atrophy of successive follicles and glands takes place. The explanation of this is simple: the atrophic process has affected first and chiefly the *serous glands*, which are numerous in the nasal mucous membrane; their function is, by their secretion, to render the nasal mucus thin and watery, but this function being abolished by their destruction, the mucus secreted by the mucous glands, large numbers of which still remain intact, is viscid and tenacious; it adheres to the mucous surfaces, and rapidly desiccates in the respiratory current of air. Large crusts and scabs thus form readily and cling closely in the nasal passages and at the vault of the pharynx. Impacted in the narrowed parts of the canals, pent up beneath the turbinated bones, constantly growing in size by the addition of the secretions poured out beneath them and prevented from escaping, is it any wonder that putrefactive changes set in, that the matter thus imprisoned decomposes, that fetor is established, and not only this, but the irritation of the mucous membrane, caused by the presence of these pent-up purulent discharges, for from muco-purulent to purulent they rapidly change, reinfect the membrane, so to speak, excite further discharge, and thus constantly aggravate the disease.

So passes the atrophic form of rhinitis into the fetid—not always though, fortunately for the patients, and not very rapidly in any case. The symptom of the condition now established may be given in one word: fetor—stinking truly in every sense, disgusting to the patient, disgusting to his friends, disheartening to the physician, who must acknowledge his inability to do more than relieve his patient—cure the condition which gives rise to it he cannot. The only difference, rhinoscopically, which is perceptible between the atrophic and fetid stages of the disease is the increased amount of crusts and yellowish or greenish scabs, and, perhaps, the increased degree of space, due to the atrophy of all the parts upon which they lodge, which is seen in the latter variety.

Let me now recapitulate. We see, clinically, three forms of chronic rhinitis: 1. Simple, uncomplicated, chronic rhinitis; 2. Hypertrophic rhinitis; 3. Atrophic or fetid rhinitis. Certainly, these names and forms must be easy to remember. How important for your success in their treatment and views as to prognosis the remembrance of them and of their different pathological natures is, I have tried to impress upon you. Be sure, then, by means of the direct anterior and posterior rhinoscopic examination of the parts, that I told you, early in the course, how to make, that you know just where your patient stands in the pathological scale.

I turn, now, to a part of my subject which will have, perhaps, a more active interest for you, namely, the *treatment* of chronic rhinitis in its various forms. Here, again, I must limit my remarks. The medical journals teem with advice as to the proper methods of treatment. Everybody has something to say about the way to manage chronic catarrh of the nose. Much that you read will not commend itself to your good judgment, to put it mildly. Some advice is reliable. I shall try to remember, in what I am about to say, that I am speaking to those who are, or are about to become, general practitioners, and, therefore, will not have at their command the elaborate apparatus, the many instruments, and the varied means of treatment possessed, perhaps, by the specialist, and while I am obliged, in order to make my lecture complete, to allude to all recognized methods, surgical as well as medical, I intend to give you simple rules, by means of which any one of you can treat his cases. You will, of course, understand that I refer to uncomplicated instances of chronic rhinitis. If there coexist in given cases such complications as deflected septum, multiple hypertrophies, nasal polypi, exostoses, and cartilaginous thickenings of the septum, large hypertrophies, veritable tumors of the adenoid tissue at the vault of the pharynx, it is, perhaps, best that you should entrust them to the more skilled hands of those whose special studies and experience fit them to undertake the task.

First of all, let your patient clearly understand whether or no he really has "nasal catarrh;" you may, perhaps, give him much comfort in this way. If he has, make up your mind as to the particular form; upon this depends what you tell him, in the way of prognosis, and what you ought to do in the way of treatment; in any event, let him clearly appreciate the fact that you cannot cure his disease in as many days as he has had it months or years; perhaps, that you cannot cure it at all (in the atrophic or fetid form), but that you can give him much relief from his most urgent symptoms. Honesty is here the best policy. Inform him that he will require some patience, you some regularity in his visits (as a rule, the domestic treatment of chronic disease of the nose is unsuccessful), that there is here no royal road to success, but that, with patience and persistence, much good can be done, that success often, much oftener than is commonly believed, can be attained, and by success I mean complete, permanent, cure.

Now what are you going to do for your patient? First, you are to determine carefully whether any indications exist in the given case for general constitutional treatment, apart from local measures, and they not only often do, but are too often overlooked. If what we term a catarrhal diathesis be present, if scrofula or herpetism can be proven to exist, in short, if the nasal catarrhal disease depend upon a diathetic condition, general treatment has primary importance. Cod-liver oil, iron, and the iodides, with other remedies that will suggest themselves in particular cases, should be given for long periods. Prophylaxis, likewise, should not be forgotten; the careful attention to all habits which proceed from due consideration of wise hygienic laws will often constitute an important part of the advice that you give to your patient. Bathing, clothing, and temperature, friction and shampooing will, in many instances, be a duty upon which you will insist. The question here arises whether any of the special agents of the pharmacopœia that have been from time to time recommended as having a useful therapeutic effect upon the mucous membrane of the respiratory passages in a diseased condition are in reality of great value. I believe

that this is questionable. I have made use of many and have never been able to convince myself that any one possessed a decided specific effect. Cubebs, ammoniacum, muriate of ammonium, and perhaps sulphur, have given the best temporary and sometimes permanent results. In each case, however, their use has been associated with that of local and direct treatment of the mucous membrane. In many cases, on the other hand, the affection will appear as a purely local one, and can be met and conquered by local treatment alone. This is of unquestionable value; the means we will consider in our next lecture.

ORIGINAL ARTICLES.

SARCOMA OF SYNOVIAL SHEATHS.[1]

BY THOMAS M. MARKOE, M.D.,
OF NEW YORK.

DURING the past four years several cases of disease of the synovial sheaths in the sole of the foot have presented themselves to me, the nature of which I failed to comprehend, and the gravity of which I did not appreciate till the results, which I propose to relate in this paper, afforded the data for a correct judgment as to the nature, and some help at least towards a correct diagnosis, of the affection. The disease which I propose to describe to the Society must, I think, be a rare one, as I have seen only the three cases here recorded, and perhaps the best way of introducing the subject will be to describe the last case which has come under my notice.

CASE I.—A. B., a middle-aged man, apparently in excellent health, presented himself at my office, during the spring of 1883, for advice concerning a swelling which had slowly developed in the sole of his foot. He said that about two years previous he began to suffer aching pain in the part, which he could not attribute to any strain or bruise. This pain was principally felt when standing, or after walking too far. About eighteen months ago he first noticed a fulness in the sole, most marked under the metatarsal bone of the great toe, but extending along the sole up behind and a little distance above the internal malleolus. This extension from its original seat had taken place very slowly, and, he thought, was still going on. By reason of this swelling the foot has gradually become so disabled that he can scarcely walk at all without a crutch, and his sleep at night is much disturbed. He feels tolerably well in all other respects, but the condition of his foot completely disables him. On examination, a swelling was found occupying the inner half of the sole, and extending round the internal malleolus up a little distance above that prominence, where it terminated somewhat abruptly. The swelling was tolerably firm, but yielding to pressure in such a way as to convey the idea of a fluid or semifluid substance contained in a firm and rather tense cyst or sac. This idea was strengthened by an indistinct sense of fluctuation which could be felt at different points of the swelling and was sufficiently distinct to have induced the gentleman who had charge of the case to aspirate the tumor. No fluid was obtained. The tissues surrounding the swelling seem to be in a perfectly normal condition, and no inflammatory features have at any time been noticed. After a careful examination of the case, I pronounced a very doubtful diagnosis, and added a prognosis which I said might be very serious, including in the future a possible amputation, and—what I did not say to him, however—a possible fatal termination. My reasons for this gloomy prognosis were drawn from my experience in two previous cases, which I now propose to relate.

For the clear understanding of what I am presenting to the Society, I ought perhaps to recall a few points in the anatomy of the parts involved. It will be remembered that, as the tendons about the wrist and ankle pass under their annular ligaments, they are contained in fibrous canals, which hold them firmly in their position and afford them a fulcrum, if we may call it so, against which the tendons act, in the varying positions of flexion and extension of the hand and foot. To facilitate the play of these tendons, the fibrous sheath is lined by a serous, or rather a synovial membrane, which at varying points is reflected from the surface of the sheath on to the surface of the tendon. This arrangement produces the usual closed serous sac, through which the tendon, covered by its layer of serous membrane, plays with a freedom from friction which is much increased by the smooth lubricating synovia which is secreted from its free surface. In the ankle these synovial sheaths commence a little above the malleoli, and extend forwards into the sole to a distance varying with the point of insertion of the tendons they accompany. The one accompanying the extensors of the foot and the flexors of the toes, is, it will be remembered, rather more extensive than the rest, and passes round the internal molleolus into the sole extending quite far forward dividing into a compartment for each separate tendon as it goes toward the distal end of the metatarsal bone to be inserted into the phalanx. It is well known that these synovial sheaths are subject to certain diseases, in which the synovial secretion is increased and variously altered. These diseases give us the usual swellings along the course of the tendons with which we are all familiar; which swellings may contain either pure serum, or thicker fluids variously modified, or fluids containing semisolid particles in the shape of rice grains or melon-seed and various other modifications of concrete fibrin. All these cases present one common feature, viz., an elastic, somewhat tense swelling which gives a feeling of fluctuation which is more or less distinct according as the contents are fluid or semisolid, the walls of the sac thick or thin, and the distention of those walls great or slight. The recognition of a distended synovial sheath is a matter of no great difficulty, but the appreciation of the nature of its contents is not so easy. Aspiration will reveal this point in many cases, but in many others nothing but a free incision will suffice. These affections, as most of us have experienced, are sometimes difficult to manage, particularly those of long standing, when the walls of the sac have become very much thickened, and the contents perhaps semisolid. Operations

[1] Read before the New York Surgical Society April 9, 1884.

upon these serous sacs have always been regarded with anxiety, because of the inflammation liable to follow their incision, an inflammation which unfortunately does not always confine itself to the serous membrane, but spreading to the surrounding areolar interspaces produces some of the most formidable cases of far-spreading suppurative cellulitis.

The following cases present some features in which they differ from those which I have thus sketched, and serve, it seems to me, to suggest a modification in diagnosis, and a caution in prognosis which may possibly save a serious disappointment.

Case II.—Frank McN., æt. 43, a man of good habits, and apparently in excellent health, came into the New York Hospital December 5, 1879, with a swelling on the plantar surface of the great toe of one foot. It had commenced about two years before, without any known cause, and had slowly and steadily increased in size. It was from the first somewhat painful on walking, but of late had become so serious an impediment to him that he was very desirous that something should be done for his relief. There had never been any evidence of inflammatory action about it, though it was more painful at some times than at others, particularly when he had been obliged to stand or walk on it more than usual. On admission, a softish, doughy-feeling swelling occupied the under surface of the great toe, extending back into the ball of the toe, so that its posterior margin was well behind the metatarso-phalangeal articulation. It had an elastic feel, and when pressed upon the whole swelling became hard and tense. A feeling of fluctuation was distinct enough, but left a doubt in the mind whether it was produced by a fluid or a semi-solid material within the cyst. The cyst wall seemed to be quite thick. The diagnosis was clear as to the distention of the synovial sheath, but the nature and consistence of the contents were not so manifest. My notes do not say that aspiration was performed; but if it was, no information was elicited by it. The case was regarded as one of the usual forms of distention of the synovial sheath from a low grade of inflammation, with effusion of a fluid, which had become partially solidified by the admixture with it of some form of aplastic fibrin. I was at that time experimenting with "through drainage," and on the 6th of January I employed that method in the treatment. An opening was made into the sac as far back as possible, and the contents were, with some difficulty, squeezed out. The substance thus evacuated was of a yellowish-white color, looking not unlike the sebaceous contents of some of the cysts of the scalp; but it was evidently not a perfect fluid, for certain portions of what was squeezed out showed some such coherence as would be found in a soft growth which had been forced from the cavity in which it had lain, and which, though in the main broken up into a diffluent pulp, showed clear indications of its having been originally a continuous tissue, though of the softest possible consistence. Not much attention was given to this peculiarity at first, as its cohesion was supposed to be explained by the idea of the fibrinous masses of which the substance was partly composed adhering more or less intimately together. It was afterwards recognized that this feature was of most important significance. After emptying the cavity of all that could be forced out, the walls, as far as could be seen through the opening, presented the ordinary smooth, shining, white surface of healthy synovial membrane. An opening was now made at the anterior extremity of the cavity, and a perforated drainage-tube passed from one opening to the other. The wound was dressed antiseptically, and the ends of the tube were allowed to project through the dressing, thus allowing the cavity to be easily washed out with a weak solution of carbolic acid. No inflammatory reaction occurred. The tube was removed in about a week, and the wounds soon healed. The patient thought himself cured, and could walk pretty well before he left the hospital. Six months afterwards, I saw him, with the swelling about as bad as before, and the impairment of motion steadily increasing. From that time I have not seen him.

The report of the pathologist on the material expressed from the cavity was as follows: "Specimen consists only of irregular fragments scraped and torn out of what seemed to be a cyst, though the cyst-wall was not demonstrated. Microscopic examination: 1st. When examined in fresh state there was found to be much amorphous fibrin, and tumor was thought to be a benign cyst. 2d. The fragments when hardened show, upon section, in some cases only amorphous fibrin, but in other cases the typical structure of spindle-celled sarcoma."

Case III.—Delia D., æt. 25, entered the New York Hospital January 21, 1880, with a swelling of the sole of the foot. The history was similar to that of the other cases. She said that about two years previous she began to experience pain and soreness on walking, which she attributed to the pressure of her shoe. About eighteen months before her admission she sprained the same ankle, since which a lump appeared below the inner malleolus, which has slowly increased. It has given her much pain, especially on walking. The swelling had been punctured several times. The first time a little serum flowed out, but in subsequent punctures nothing was obtained. She appears to be in good general health, and when quiet does not suffer much from her foot. During and after walking, however, she suffers so much that she is completely disabled. The swelling occupies a large part of the sole of the foot, and extends behind and above the inner malleolus. It is softish, non-elastic, but by pressure on one part of the swelling the whole can be rendered tense. A feeling of fluctuation is perceptible, giving the idea of thick, viscid, or semisolid contents. The tissues overlying the tumor are perfectly normal. It was clearly a case of distention of the large synovial sheath which surrounds the flexors of the toes and the extensors of the foot; but the nature of the distending material could not, of course, be ascertained. In any case, opening the sac and emptying it of its contents was the first step in any method of cure. This was accordingly done January 27, 1880. An opening was made nearly as far back as the malleolus, and through it the cavity was evacuated. Nothing flowed out when the cavity was first opened, but on firm pressure a semifluid substance, which exactly resembled that found in McNair's case, was with some difficulty

forced out, leaving a large cavity extending forward so far that a straight steel sound passed quite to the root of the toes. The difficulty of extruding this substance was so great as to give me the idea of its adhesion to the walls of the sac. To make sure of this point, and to enable me to break up the semi-solid mass so that it could be thoroughly evacuated, I enlarged the opening till it admitted my finger. I could now recognized that there was, at many points, a close adhesion of the contained mass with the walls of the cavity, which were lined by a bright, shining serous membrane. The finger could now trace the division of the main cavity into several smaller chambers, which represented the prolongation of the sheath forward over each separate tendon as it went to be inserted into the phalanges. All these cavities had been enormously distended by the accumulating mass within, so that I could move my finger about through quite a large space in the middle part of the sole, and could even push the tip of it into some of the enlarged anterior digital prolongations. With the finger and with the scoop and forceps I evacuated the cavity as completely as I could, but I was sensible that a considerable portion of the mass was not reached, and could not by any of my contrivances be perfectly removed. The operation was completed by making an opening anteriorly near the base of one of the toes, and passing a through drainage-tube from one opening out at the other. The wound was dressed antiseptically, with the ends of the tube projecting, and a solution of carbolic acid 1 to 60 was injected into and through the cavity once in every three or four hours. No inflammatory reaction followed. The tube was not removed till February 6th. The wounds healed slowly. She was discharged improved May 4th, but, as in McNair's case, all traces of the tumor had not disappeared, and she could not walk without pain. The semisolid contents of the tumor were very carefully examined. To the naked eye it gave the appearance of a very soft, almost diffluent substance, much broken up by the violence done in removing it, but sufficiently coherent in many points to demonstrate that it was a soft tissue and not a thick fluid. The microscopic examination by Dr. Peabody showed "the typical formation of a spindle-celled sarcoma, being almost identical with the scrapings from the foot of McNair." She was readmitted to the hospital September 18, 1880. The swelling was as large as ever, and quite as painful. Her general condition was good. There was no cachexia and no enlarged glands could be discovered. There was, however, on the opposite side of the foot, another growth which had developed since she left the hospital, and which did not appear to have any connection with the tendons or their sheaths, and also another growth in the fatty tissue covering the lower surface of the os calcis. The clinical history, taken with the microscopic appearances, so clearly pointed to extension of sarcomatous disease, that amputation was advised and performed on the 9th of October, low down in the leg. She made a good recovery, and nothing has been heard from her since she left the hospital.

Dr. Peabody's report of the dissection of the foot is as follows: "Beneath the cicatrix, and extending thence backwards and forwards over a space irregularly circular with a diameter of an inch and a half, is a new growth. It is very soft and friable, of a reddish-gray color, and contains numerous small spots of hemorrhage. It lies beneath the skin, and spreads thence deeply downward, involving the sheaths of the tendons. On the outer side of the foot, just below the malleolus, is another mass of similar material about as large as the end of one's thumb, which bears the same relation to the superficial and deep tissues as does the growth on the opposite side of the foot. Underneath the os calcis, is a mass of the same tissue three or four times the size of the last described mass. It invades the tissue of the bone at one point to the depth of a quarter of an inch. Just behind the ankle-joint is a very small collection of material apparently similar to the others; it is not larger than the tip of one's finger. These masses of new growth are all discrete, being separated by areas of tissue to all appearance healthy. The tissue of the new growth, examined microscopically, is found to be very rich in spindle cells and in oval cells of small size, joined by a very small amount of fibrous intercellular substance." From this it is evident that the recurrence was not confined to the synovial surface, as was the original disease, but had passed through into the surrounding tissues, and besides had developed in new and isolated spots, where it was not known or suspected to exist at the time of operation. This, therefore, may fairly be regarded as a case not merely of recurrence *in loco*, but one of commencing generalization, which entitles the affection to be considered as of the most decidedly malignant character.

The literature of diseases of the synovial sheaths seems to be extremely meagre. A great many isolated cases of the ordinary forms are scattered through the journals, and Mr. Hulke, in the *Medical Times and Gazette*, gives a short account of a case in which he found, in a post-malleolar swelling, the cavity filled with small grains, as he describes them, of the shape and size of melon-seeds; but I have not yet been able to find any description of an endogenous growth within the synovial sheaths which in any way resembles that which we have been considering. Fournier and Verneuil have published short papers on the form of synovial distention which is dependent upon syphilis, but to this form their cases and remarks are strictly confined.

I have presented these cases to the Society because I think they offer a phase of sarcomatous disease which has not hitherto been described. Beside the interest which may attach to them as rare developments of sarcoma, they have, I have thought, a practical importance in the diagnosis, and especially in the prognosis of synovial diseases. Traumatic and spontaneous inflammations of the synovial sheaths, both acute and chronic, are certainly not very uncommon affections, and to discriminate between these comparatively harmless conditions and those in which dangerous and even fatal results may be, possibly, realized, is worthy of careful attention. That such discrimination can be made with certainty I would not venture to claim, but I think that the slow, painless progress—at least in the earlier stages

—the absence of distinct fluctuation, the firmness and tension of the sac, and the negative results of puncture, may lead to a suspicion, if not to a certainty, of sarcoma and may thus have an important bearing both on treatment and on prognosis.

Before concluding, I wish to read the following letter:

Dear Doctor:

I am not sure whether this case belongs to your series or not.

Male, 30, laborer. Tumor removed by Dr. Wood, June, 1869. Ten years ago patient first noticed a tumor the size of a pea in the palm of the hand. It grew slowly at first, rapidly within the last three months. It is now situated between the palmar fascia and the sheath of the tendons. It is of pyriform shape, six and a half centimetres long.

When laid open, the tumor is found to consist of a fibrous cyst-wall, from which grow soft masses filling up the cavity. These masses are soft, succulent, yellow, mottled with hemorrhages; they are composed almost entirely of cells, which are of round, oval, fusiform, and stellate shapes.

The history as to the exact position of the tumor is not satisfactory, but I believed at the time that it originated in the sheath of one of the tendons.

Yours truly,

Francis Delafield.

THE PATHOLOGY, ETIOLOGY, AND PROPHYLAXIS OF PUERPERAL FEVER, FROM THE VIENNA STANDPOINT.

By W. W. JAGGARD, M.D.,

ADJUNCT PROFESSOR OF OBSTETRICS IN THE CHICAGO MEDICAL COLLEGE.

(Concluded from p. 445.)

III. Prophylaxis: *A. Before Parturition.*—Adequate ventilation, the maximum quantity of "unprebreathed" air—to use one of Prof. Penrose's happy expressions—is the first, and, perhaps, the most important precept in the prevention of puerperal fever. In the words of Prof. Carl Braun,[1] "Puerperal women are to be isolated not by insulated houses and gardens, not by walls, but by the continuous conduction of large quantities of fresh, pure, warm air."

Since infection may occur before the first stage of labor begins, the ventilation of the apartments of the *pregnant*, as well of the parturient or puerperal woman, requires critical attention. A generous change of air is a far more efficient means of prophylaxis than the removal of articles of furniture, such as curtains and chairs, or the most elaborate germ-extermination by carbolic acid scrubbings and sprays.

The temperature of the woman should be carefully noted during the last weeks of pregnancy. Lukewarm baths, during this period, are of marked benefit. Immediately before parturition, a good bath in lukewarm water with a vigorous application of soap, is indicated for obvious reasons.

B. During Parturition.—Prophylactic measures during labor may be conveniently comprehended under the following rules:

1. The physician, midwife, or any attendant must not have come within the sphere of activity of any contagious or infectious disease for the space of twenty-four hours, at least, preceding labor. A similar degree of freedom from infectious matter is demanded as regards wound secretions, healthy or otherwise, and animal cadavers.

2. The temperature of the woman must be taken before the vaginal examination is made. If the patient has an abnormally high temperature, as the result of endometritis with or without *tympanites uteri*, the medical attendant is usually banished, after the delivery of the child, from the lying-in-chambers in the departments of Braun and Spaeth, for the space of twenty-four hours. During this period he is not permitted to examine healthy pregnant, parturient, or puerperal women. Braun enforces in his clinic, and recommends in private practice, the rule of taking the temperature of the parturient woman at intervals of three hours. He has corroborated Winckel's researches into tokothermometry, and regards the temperature as an indication of the highest importance in the determination of the time for operative procedure, and as a prognostic element during the puerperium.

3. The hands of the examiner must be free from infectious material, and must be absolutely clean. Freedom from infectious matter is assumed, if the physician's hands have not come into contact with any pus-secreting surface—healthy or otherwise—or cadaveric material, for twenty-four hours preceding labor. The second condition, according to Braun, requires that the hands, and particularly the fingernails, be scrubbed with a nail-brush in a running stream of two per cent. solution of carbolic acid; a soft soap containing a large excess of alkali is employed. After carefully trimming the nails, the hands are dipped into a one-fifth per cent. solution of potassium permanganate, until colored brown. They are then immersed for a few seconds in a ten per cent. solution of hydrochloric acid. The hydrochloric acid, suggested by Prof. Schneider, acts as an efficient disinfectant, at the same time removing the stain of the chameleon mineral. As a lubricant for the examining finger, a two per cent. solution of carbolic acid in glycerine is used.

This method of disinfection of the hands has been tried in Braun's wards, with the happiest results, since 1862. Prof. Spaeth insists merely upon Castile soap, nail-brush, two per cent. carbolic acid, and vaseline.

4. Irrigation of the external genitals during labor with some disinfectant solution, such as two per cent. solution of carbolic acid, one-fifth per cent. solution of salicylic acid, one-tenth per cent. solution of thymol, is of advantage, especially during an epidemic of puerperal fever. In protracted labors, after rupture of the bag of waters, and partial or entire escape of the amniotic liquor, sitz-baths of lukewarm water several times during the day have a beneficial effect upon parturition, and prevent infection.

5. Irrigation of the uterine cavity is indicated, after delivery of the placenta, by septic endometritis, discolored, bad-smelling amniotic liquor, dead and macerated fœtus, or by the invasion of the uterine cavity by the hand or any instrument.

[1] Gynækologie, p. 884.

The curved uterine tube is of hard rubber, 25 cm. (10 inches) in length, 3 cm. ($1\frac{1}{5}$ inch) in circumference, and terminates in an olive with lateral apertures. The irrigator is a modification of Esmarch's by Leiter, and is simply a large, conical glass flask. A weak solution of thymol is recommended as the disinfectant injection. All air in the rubber conducting-pipe and uterine tube is carefully displaced before the introduction of the latter into the cavity of the uterus. It is customary to introduce within the uterine cavity and vagina, after irrigation, a *bacillus* containing five grammes of iodoform.

6. All instruments employed during labor, inclusive of uterine tubes and catheters, are kept submerged in a five per cent. solution of carbolic acid.

7. The placenta must be critically examined, and all remaining tufts or blood-clots removed from the uterine cavity. Massage of the fundus and Credé's method of expression usually answer every indication. In Braun's clinic, in the eleven years from 1862 to 1872, inclusive, 48,249 women were delivered. The placenta was expelled by uterine massage or Credé's method in 48,132 cases, or $99\frac{8}{10}$ per cent. Detachment, by the introduction of the hand into the cavity of the uterus, was required only in 117 cases, or $\frac{2}{10}$ per cent.

In general terms, it was necessary to detach the placenta by the hand introduced into the cavity of the uterus but once in five hundred cases.

8. At the close of the third stage of labor, the perineum must be carefully examined, and all lacerations or episiotomy wounds must be closed by *serres-fines* or sutures. Contused wounds of the vagina must be painted over with neutralized tincture of the sesquichloride of iron, acetic clay, tincture of iodine, Goulard's extract, thymol, or carbolic acid. Fehling's powder (salicylic acid one part, starch five parts) acts well.

C. During the Puerperium.—The rules for the management of the puerperium may be collected under six headings, and are essentially those enunciated by Braun in a work upon the puerperal process, published years ago.

1. A rapid healing of the uterine wound is best effected by rest, restricted diet, and the most absolute cleanliness. It is seldom that vaginal injections are indicated, and still more rarely are intrauterine irrigations required.

2. The resorption of pus, secreted by the wound surface of the uterus, is best prevented by the exhibition of large quantities of lukewarm, sweetened drinks, and avoidance of all diuretics, diaphoretics, and drastic cathartics.

3. The dangers of puerperal thrombosis are lessened by securing increased uterine contraction in the third stage of labor and during the early hours of the puerperium. Massage of the abdominal walls and fundus, for a considerable length of time, at regular intervals, application of the binder, and exhibition of *secale cornutum* are preventive means which must be employed, particularly during the presence of an epidemic, even if no *post-partum* hemorrhage be perceptible.

4. The lochial secretion must be regulated by rest in bed, utmost cleanliness, protection from catching cold, and careful ventilation.

5. The resorption of pus through the genital "puerperal ulcers" must be prevented, as far as possible, by the topical application of potassium permanganate, basic sesquichloride of iron and iodoform, through the first eight days of the puerperium.

6. To check the fermentation-process in the blood, or to limit its pernicious tendencies, from five to fifteen grains of quinine may be administered daily with advantage. Dysphoria, elevation of skin temperature above 39° C., and pulse frequency above 100, constitute indications for the exhibition of this drug.

The prophylactic measures thus briefly sketched have been in active operation since 1862. The results are evident upon inspection of the statistics, which have been most conscientiously and accurately compiled, and there can be no reasonable doubt as to their absolutely truthful character.

From 1847 to 1862 there were in the Vienna Obstetric Clinic 64,500 cases of labor, with a mortality of 3.45 per cent., and, from 1863 to 1878, in Carl Braun's wards there have been 61,949 cases, with a mortality of 1.61 per cent.

Since 1878, the results have been even more favorable, so that, at the present time, the mortality rate from puerperal fever in Carl Braun's clinic is one-half of one per cent. During the winter quarter of 1883, among some nine hundred cases of labor, no death resulted from puerperal fever.

PUERPERAL ECLAMPSIA TREATED WITH PILOCARPINE.

BY E. L. MARÉCHAL, M.D.,
OF STOCKTON, ALA.

HAVING recently seen a report by Dr. Murphy, of Sunderland, Eng., of two cases of puerperal eclampsia successfully treated with pilocarpine (*Am. Journ. of Obstetrics*, December, 1883), and having, during the past year, had the same experience in the use of that remedy, in the same morbid condition, it may be of sufficient interest to the profession to justify me in putting it upon record; more especially since the unfortunate results reported by Barker, of New York, may deter others from giving their patients the benefit of what my experience, while limited, induces me to look upon as a valuable addition to our therapeutic resources.

Mrs. B., aged twenty-one years, had had two abortions at about the sixth week, and was now well advanced in the ninth month of her third pregnancy. On June 20, 1883, I was requested by her husband to see her, on account of the disturbed condition of her bowels. I found her sitting up, but enormously œdematous, and with vision so disturbed as to be unable to recognize anyone when seated beside her. There were headache, vertigo, and persistent nausea, with occasional paroxysms of vomiting. While the bowels were greatly disturbed, the calls to stool being frequent and the dejections watery, the urinary secretion was so much below

the normal as to be practically *nil*. Upon examination with heat and nitric acid, the urine became almost solid in the test-tube. No microscopic examination was made. Ordered her to have sulphate of magnesia to encourage the watery dejections, and Basham's mixture *ter die*. For the next several days there was an apparent improvement in her condition, the œdema partially subsiding, and the kidney secretion being greatly augmented. On the morning of the 24th, she was seized with eclampsia. Found her in a convulsion, having had two before my arrival. Upon inquiry, I was informed that in the past twenty-four hours there had been no action upon the bowels or bladder, and soon satisfied myself that the latter organ was empty. I immediately gave one-fifth of a grain of pilocarpine muriate, hypodermatically, and in four or five minutes the characteristic sweating ensued. She went into convulsions just as I administered the pilocarpine, but so soon as its characteristic effects were produced she became thoroughly relaxed, and had no further trouble. In five hours there was a copious dejection from the bowels and bladder. The pilocarpine produced profuse sweating, and notwithstanding that she lay in a comatose condition for the next twenty-four hours, it was not thought necessary to give anything, not even to counteract the so much dreaded depressant effect of the remedy employed. On the 26th, she was bright and cheerful, but still complaining of dimness of vision and headache. On the 27th, after a perfectly normal labor of short duration, I delivered her of a living male child, without interference or an anæsthetic.

With a clear conception of its physiological action, pilocarpine was employed in the above case, with the happiest results. Believing, as I do, that puerperal eclampsia is, in most instances, a reflex-neurosis, while the retention of excrementitious substances only renders the patient more susceptible to the eclamptic seizure, and at the same time exerts an aggravating influence, I do not believe that the administration of pilocarpine would yield the same beneficial result in every case. But, in cases in which there is a complete locking up of the secretions, and convulsions ensue, the plain and positive indication is to produce vicarious elimination, and what channel is more available than the skin, and what agent more certain and rapid in its effects than pilocarpine? It acts more rapidly than the hot baths so largely employed in Vienna, and my experience, not only in the eclamptic condition, but in other morbid states in which the production of profuse diaphoresis was indicated, justifies me in the assumption that, judiciously administered, it is as safe as many therapeutic agents daily used by practitioners, and certainly as reliable.

MEDICAL PROGRESS.

Complete Dislocation of the Astragalus Forwards.—Dr. L. McLane Tiffany reports the case of a man who slipped on an icy sidewalk, and landed with the ball of the right foot upon the edge of the curb—the heel, of course, unsupported. He fell to the ground, striking his right side, and was at once aware that his foot had received injury, and so made no attempt to use or even move the injured member. Dr. Tiffany saw the patient at his home one hour later.

The foot was fixed rigidly midway between flexion and extension, the malleoli seemed nearer the sole of the foot than normal. There was no swelling, and anatomical points were well defined. A large, hard tumor was present upon the dorsum of the foot, which by sight and touch was clearly made out to be the astragalus. The extensor tendons and skin were tightly stretched over it. The bone was dislocated directly forwards the articular surface, for the tibia was subcutaneous; the head and neck could be felt anteriorly while the lateral facets for articulation with the malleoli were plainly to be recognized. Reduction was attempted, without anæsthesia, in view of the recent occurrence of the accident, as follows: One assistant grasped the heel and anterior portion of the foot, making strong extension; another steadied the limb at the knee, while the operator stood to one side of the foot and grasped the malleoli with one hand, and with the other manipulated the astragalus back to its proper situation. He made pressure from side to side upon the dislocated bone so as to dislodge it, and then pressed directly backwards toward the joint. Extension and manipulation were commenced very gently, so as not to startle the muscles already too tense. Within less than two minutes reduction was effected. The limb, as high as the knee, was enveloped in raw cotton and put in a starch and pasteboard splint. A good deal of swelling took place, and discoloration from effused blood extended in patches as high as the knee. A large, dark discoloration appeared behind and below each ankle, the bones being of course intact. Convalescence has continued without drawback. The foot remained in the splint during fourteen days.

Seven weeks after the accident the foot is still somewhat swollen, but the patient walks with a cane.—*Maryland Med. Journ.*, March 29, 1884.

Nephrotomy for Obstructive Suppression of Urine.—Mr. Bennett May thus expresses his ideas for operative measures in obstructive suppression: In anuria from impacted calculus, urine does not ordinarily accumulate in the loin to any appreciable degree. Dilatation only takes place where the obstruction is partial in degree and of long duration. Where it is sudden and complete, no dilatation occurs, because the secretion is arrested directly the pressure is equalized; and, under these circumstances, not more than half an ounce of urine will be found in the pelvis of the kidney; though ultimately, as the experiments by Strauss have shown, the organ may become converted into a cyst. The usual seat of impaction of a calculus is near the bladder, or so far down the ureter as to be quite away from the possibility of dislodgement.

His suggestion is to establish a fistulous opening in the loin (by nephrotomy) for the escape of the urine; and if the operator be so fortunate as to light on the stone at the upper end of the ureter, so much the better prospect of obtaining a satisfactory result.

When there is pain in one loin, and the patient is seen early enough, an exploratory incision should be made on that side. The incision should be made before

symptoms of suppuration set in, as patients sometimes die of abscess caused by the irritating effect of the stone.

When should the operation be performed? A previous history of suppression, with pain on the same side, or a previous attacks of nephralgia, would point to the presence of a calculus lodged in the pelvis of the kidney or in the upper end of the ureter, and would indicate an operation for the double purpose of removing the stone and relieving the suppression; and, as the further retention of the stone must lead to destructive disorganization of the kidney, he thinks that the surgeon is justified in operating early under these circumstances. Swelling and resistance in the loin, with rigors and fever, point to suppuration, and really demand the very simple proceeding of an incision down to the kidney, though it is doubtful whether it would not now come too late.

In a first attack of suppression, and without previous nephralgia, the decision may be more difficult, because spontaneous relief is not uncommon. One such recovery, after twenty days' complete anuria, is recorded by Dr. Russell. He believes the average duration of life is from six to eight days, death usually terminating the scene rather suddenly, and without uræmic symptoms. He knows that a patient can live five whole days without a particle of renal tissue in the body, and suffer very little obvious disturbance (*British Medical Journal*, September 1, 1883). But he thinks the surgeon would be justified in operating almost at any time, for he can do very little harm, though he might receive the blame of an unavoidable death in case of failure to relieve.—*British Medical Journal*, March 8, 1884.

NEPHRECTOMY.—PROF. A. VERCELLI performed this operation, in Milan, on March 10, for carcinoma of the kidney. The patient died in five hours.—*Gazz. degli Ospitali*, March 19, 1884.

THE CURATIVE ACTION OF IODOFORM IN CARDIAC LESIONS.—PROF. BAL. TESTA has recently made a report on this subject in the *Journal di Clinica e Terapia*, Fasc. 8 and 9, 1883. Iodoform was first used in cardiac affections by Moleschott. He was induced to use it by finding that it increased the force of the heart, and produced painful palpitations when given to healthy persons.

Five cases have been reported in which this drug was successfully used; of these four were cases of mitral insufficiency with œdema and catarrhal bronchitis. It has a salutary action in organic diseases of the heart and in the functional troubles dependent upon them. It should be used with great prudence, as it causes, in toxic doses, fatty degeneration of the heart, liver, and kidneys.—*L'Union Méd.*, March 11, 1884.

THE TREATMENT OF FISTULA IN ANO.—After a review of twenty-three cases of fistula ani operated on during three years in Prof. Grube's clinic, in Charkov, DR. V. M. ZAKHAREVITCH (*Vratch*, 1882, No. 36) comes to the conclusion that, as a rule, the cutting operation must be performed. The use of the thermo-cautery must be limited only to those rare cases in which the patients are extremely exhausted, and in which even the slightest loss of blood must be avoided. The method of dividing the fistulous bridge by means of a stout silk ligature must be entirely discarded, since it is associated with prolonged reaction and suppuration. In the author's cases, the wounds made by the knife healed in eighteen days; those by the thermo-cautery, in twenty-seven; and those by the ligature, in thirty-five days.—*London Medical Record*, March, 1884.

THE PRESENCE OF FIBRIN IN THE URINE.—The presence of fibrin in the urine, says MEHU, is not rare. It would seem that whenever one finds blood in the urine, fibrine should also be found; but such is not the case; for generally the examiner finds more dissolved albuminous material, and blood-serum consequently, than would be expected from the number of red corpuscles. Apart from cases of copious hemorrhage into the bladder, fibrin is not unfrequently found in the urine. It easily remains dissolved if the urine is ammoniacal, and cannot be easily separated after slight acidulation with acetic acid, since it has remained for a certain length of time in ammoniacal urine containing bacilli.

On the other hand, in certain cases, fibrine is found when there is no trace of a blood globule, or when the amount of blood is infinitesimally small as compared with the amount of fibrin. Mehu reports two cases in which the proportion of fibrin was increased; in one the urine contained no blood; in the other there was a very small amount of blood.—*Ann. d. Mal. Gén.-Urin.*, March, 1884.

LIGATION OF THE SUBCLAVIAN ARTERY.—Dr. Giovanni Paccinini performed this operation on a boy, fourteen years of age, on January 5th, in Rome. The operation was done on account of a wound of the left axilla, which involved the artery and vein. The boy was in a satisfactory condition fifteen days afterward. —*Gazz. degli Ospitali*, January 20, 1884.

TREATMENT OF RETRO-UTERINE HÆMATOCELE.—ZWEIFEL'S method of operating is, first, to wait until the tumor is absolutely encysted. An incision is then made in the abdominal wall without touching the cyst; the hemorrhage being arrested, the vaginal wall and the blood-cyst are separated. Then an incision is made in the wall of the cyst, large enough to admit a finger, so that the cyst-wall may be seized, and the cyst is then further opened with a probe-pointed bistoury. After this, it is washed out, and a drainage-tube put in. The mortality of the different methods is, by incision, 15.3 per cent.; by puncture, 15.1 per cent.; by expectation, 18.4 per cent. The operation should never be performed until it is absolutely certain that the hæmatocele is encysted.—*Archives de Tocologie*, March, 1884.

ABSCESS OF THE KIDNEY.—J. SINGER (*Prager med. Wochens.*, No. 47, 1883) reports the case of a man, æt. 25, who, when seven years old, had a fall, from which he had hæmaturia; since that time he has had occasional pain in the region of the left kidney. After an attack of typhoid fever he began to pass blood and pus in the urine, and on examination a fluctuating tumor was found in the left hypochondrium. The tumor then began to disappear, and the man recovered. Singer thinks that the abscess must have discharged into the pelvis of the kidney.—*Centralbl. f. d. klin. Med.*, February 9, 1884.

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ERGOT IN CONGESTIONS.

THERE are certain long-known drugs which have acquired within the last few decades so much wider employment by the profession than they formerly possessed that they may be looked upon as new remedies. Thus it has not been very many years since bromide of potassium was used solely as an alterative, and in doses of five or ten grains. Next to the bromides in the importance of this second growth, in medical esteem, comes ergot, a remedy which seems steadily to increase in popularity and usefulness.

In a late number of *L'Encéphale* is an article by DR. GIRMA on the use of ergotine in general paralysis, and although we are very sure that few will obtain the results his enthusiasm expects, yet he has made it clear that the fungus should be boldly exhibited in cases offering the prodromal symptoms of the affection named. The first case reported by Dr. Girma was probably one of chronic alcoholism, and the cure permanent; but in sundry instances of seemingly true paresis there were very marked benefits derived from the daily use of about ninety grains of ergotine.

Without discussing the article of Dr. Girma any further, we desire to call the attention of our readers to the value of ergot as a remedy in all forms of congestions not attended with distinct inflammatory symptoms. As is well known, the drug has the power of contracting the smaller vessels,—is, indeed, the purest vaso-motor stimulant of the pharmacopœia. It seems to be a law of therapeutics that an enfeebled part feels first a new influence entering the system, and so when a vaso-motor stimulant comes upon the scene of a congestion, the locally dilated vessels are toned up more than are those of the general system, and the diseased vessels are thereby brought nearer the condition of the normal ones.

The reputation of ergot as a remedy in pulmonic hemorrhage is established, and we are all accustomed to say that the bleeding is stopped by the contraction of the vessels. It is, however, absurd to suppose that a ruptured bloodvessel can be so contracted as to arrest the flow of blood toward the leak. Probably, what the ergot does, is to put an end to the local congestion which accompanies and, in most cases, precedes the hemorrhage; indeed, is the immediate cause of it. In spinal and cerebral congestions, neurologists have been learning more and more to rely upon ergot as being at least more efficacious than other drugs; but it is probably in pulmonic and various visceral congestions that the fungus will eventually prove most useful.

When a decided effect is required, there is no use in administering the drug in the doses habitually employed by many practitioners. A teaspoonful of the fluid extract is looked upon by many as a large dose, but is really too small to be of value. Dr. Girma gives six grammes, or about ninety-two grains, of ergotine a day, which, as near as can be estimated, is equivalent to an ounce of the fluid extract. We have for years been in the habit of giving much larger doses; an ounce and a half of the fluid extract per day may be looked upon as moderate dosing. The ravages of ergotism have been so frightful that the fear of chronic poisoning is ever before the eyes of many of the profession; but we believe such fear, so far as the therapeutic use of the drug is concerned, to be merely fright at a bogy. Ergotism has occurred only in peasantry who were fed upon bread made from infected rye. When it is remembered that in bad seasons as much as thirty or even fifty per cent. of the flour has been ergot, and, also, that the German peasant lives chiefly upon bread, it can be understood what enormous amounts of the ergot have been taken—very many ounces per day. We have given three fluidounces of the fluid extract daily for some weeks, and have never seen any other evil result than disordered digestion or sick stomach.

The great difficulty in the use of these large doses is their tendency to nauseate; and the method of administration is a very important subject for study. The new extractum ergotæ, U. S. P. 1880, which may be considered as five times the strength of the ergot itself, affords much the best preparation. It is too soft to be made into pills without an excipient, but pharmaceutists habitually use too much of the latter. Their object is to have hard, firm, non-adhesive pills. There is, however, too great an increase of bulk; moreover, a large, soft, plastic mass is much easier swallowed than a round, hard body of equal size. The tendency of such masses to cohere is readily obviated by putting an abundance of liquorice-

root or other drying powder in the box. With a little care, ten grains of the extract can be so prepared as to be readily swallowed. The introduction to the profession, of soft capsules containing ten grains of the extract, would be a useful way of exercising some of the pharmaceutical energy at present so rampant.

Even with the greatest care, the hypodermatic administration of ergotine is too apt to produce disagreeable local symptoms to warrant its employment, except in emergencies. When a continuous effect is desired, it is often very well to use, at intervals, the rectum as a door of entrance to the system. A thirty grain ergotine suppository is very readily used, but, in our experience, an attempt to administer exclusively in this way soon leads to rectal irritation.

THE MEDICAL SERVICE ON THE TRANSATLANTIC STEAMERS.

During the past few years strenuous efforts have been made in England to reform the medical service on ocean steamships. The British press has lent its strongest advocacy, the principal medical bodies have recorded an emphatic condemnation of the existing system, and the British Medical Association, with its customary activity, has both memorialized and interviewed the President of the Board of Trade.

The question is not of a doctor's grievance. The present position of a ship's surgeon is certainly unfitted for an educated gentleman, yet so few are called upon to fill it that the conditions need not become a matter of wide professional concern. The really important aspect of the matter is the grave danger to the travelling public from an uncertain, and often incompetent, medical attendance, and the want of suitable means of caring for the sick during the transatlantic passage; and, further, and even of greater moment, the easy ingress offered to zymotic invasion of this country by the defective sanitary arrangements, and the absence of an authoritative sanitary administration, on crowded emigrant steamers.

The memorial of the British Medical Association succintly enumerates these dangers, and suggests a scheme of reform against which there can be no legitimate objection. Yet because it proposes that a regularly constituted marine-medical serivice should be formed, which would be under national control, and no longer subject to the ship-owners, that powerful and united body have offered a determined resistance, which so far has prevailed.

It appears that of the medical officers entrusted by British ship-owners with the care of lives at sea, a very large proportion are entirely unsuited for the important duties assigned them. Thus, of 141 who during the first six months of 1882 had medical charge of transatlantic steamers, not less than 60 would have been ineligible, through lack of the minimum professional qualification, for the most junior medical appointment in any of the English public services; while of the entire number only 27 who had reached their thirtieth year, possessed the lowest qualification as physician and surgeon which would entitle them to seek employment in the treatment of English soldiers, sailors, convicts, or paupers. In conjunction with which we learn that the ship-surgeon has not a particle of administrative authority, even in the most purely sanitary matters; that he is a kind of puppet in the hands of the captain and owners, and dare not take any step—no matter how urgently demanded for the safety of the passengers—which would be contrary to the interests or pleasure of his employers; that the hospitals on board are insufficient, ill placed, and often devoted to other purposes than the accommodation of the sick; and that there is absolutely no provision for the nursing of the sick, no matter how large the number of passengers carried.

Then comes the disastrous result: Among emigrants to this country, who are usually of high vitality, among whom there are fewer women and young children than in any stationary population, all of whom were passed as healthy at the commencement of their ten days' voyage, and under circumstances which should be eminently favorable to health, there exists a mortality over double the ordinary death-rate on land—a mortality pronounced by those well qualified to judge to be far in excess of the necessities of transit. And when so many deaths occur during the short transatlantic passage, it is reasonable to believe that there is a general depression of health which may be a permanent injury to many, or fatal soon after landing, but of which it is impossible to form an accurate estimate.

This defective medical service on shipboard is of most importance to the public at large in its bearing upon the importation of infectious disease. Scarce one of the lesser outbreaks of smallpox or other zymotic fever, which are of such frequent occurrence throughout the United States, but can be traced to the recent advent of immigrants; showing how futile is our quarantine system under present circumstances. Medical inspection at the time of disembarkation may be, for various reasons, desirable, but it cannot detect infectious fevers in their incubation stage, and therefore is no protection when they have appeared on board during the voyage, or when that has been accomplished within the longest incubation period of disease—possibly contracted before starting. Security in this regard must therefore lie in insisting upon every vessel and her passengers remaining in absolute quarantine during at least fourteen days from possible infection, or else in providing for a thoroughly reliable and independent medical service on board.

This latter alternative will certainly be most con-

venient, and to accomplish it should engage the earnest attention of Congress when the bill introduced by General Slocum comes before the Committee. It is believed that the service can never be thoroughly satisfactory until the medical officers are removed from the control of the ship-owners, and appointed by, and held responsible to, a government authority.

Three-fourths of the passengers by transatlantic steamers are either Americans or emigrants intending to make this country their permanent place of residence. It is therefore not only the right of our Government, but its manifest duty, to at least exercise supervision over this service. The British Australian Colonies long since established a precedent for even an active control; every vessel carrying emigrants to Queensland, New Zealand, or New South Wales, is forced to have on board a medical superintendent appointed by the Government of the Colony, and responsible to it alone. Why should not the United States show equal solicitude for the protection of its citizens? Certainly it is useless for Congress to make laws regulating the carriage of passengers by sea without in some way providing for their enforcement.

PARALDEHYDE AS A HYPNOTIC.

Since the publication, in 1883, of the papers of Cervello and Morselli, upon the physiological action and therapeutical effects of paraldehyde, from which it appeared that the agent was a valuable hypnotic, producing a calm sleep, without bad after-effects, the drug has been tried by Berger, Gugl, Peretti, Langreuter, Albertoni, Quinlan, Dana, J. Brown, Dujardin-Beaumetz, J. C. Wilson, Riggi, and others, with the most promising results.

The latest contribution to the subject is that of Dr. von Noorden, of Giessen, published in the *Centralblatt für klinische Medizin*, No. 12, 1884. Given in doses varying between forty-five and ninety grains, the average being about sixty-eight grains, a refreshing, profound sleep was induced in from fifteen to forty-five minutes, which lasted from five to six hours, and was followed, in exceptional instances only, by nausea and persistent bad taste. It was found to be especially useful in the wakefulness of nervous affections, in pneumonia, emphysema. bronchitis, pulmonary phthisis, spinal and other nervous disorders, myocarditis, valvular insufficiency, icteric pruritus, chronic rheumatism of the joints, and for the relief of neuralgic and rheumatic pains. As contraindications, there were noticed serious disease of the stomach, and phthisis in an advanced stage, with implication of the larynx, in which the cough was increased, and nausea and vomiting were excited, probably as the result of direct irritation of the ulcerated mucous membrane. In only two of the other cases were vomiting and headache produced, inconveniences which, it need scarcely be said, are witnessed after the administration of other narcotics.

Particular care was taken to observe the action of large doses of paraldehyde on the respiration and the circulation. While it exerted no influence whatever on the breathing, it slightly reduced arterial tension and the frequency of the pulse; but these effects disappeared in a few hours. These observations are confirmatory of those of Peretti, and they are of great value in indicating that the remedy may be administered with safety in cases of weak heart and other cardiac affections in which chloral hydrate is contraindicated. It should be remarked, however, that in a recent discussion at the Société de Biologie, published in *Le Progrès Médical*, March 22, 1884, Hénocque and Quinquaud declared that the drug slowed the respiratory movements, without acting on the heart, and Bochefontaine, on the other hand, observed that it diminished the rapidity of the pulse.

From the observations of Von Noorden, and of those who preceded him, it is evident that we possess in paraldehyde a hypnotic which is superior to, and more generally applicable than, chloral, since it can be administered for long periods in cases in which the latter drug would prove dangerous. A larger dose is, however, required to produce sleep than of chloral, and as it is rapidly tolerated, the dose has to be progressively increased. From the standpoint of expense, this is a serious objection, particularly in hospital practice, as we are informed that paraldehyde costs about seventy-five cents an ounce in this country, as against fifteen cents for chloral. This objection will be removed when there is sufficient demand for the agent.

KOCH'S SEVENTH REPORT ON THE CHOLERA BACILLUS.

We publish elsewhere in our current issue the last of Koch's preliminary reports on the cholera bacillus. In it will be found the details of the discovery of these bacilli in the water of certain tanks in the vicinity of Calcutta, which are in reality small ponds, often located in marshy ground, surrounded by a few huts. The inhabitants make use of the water from these tanks for every domestic purpose, including drinking, bathing, and the washing of clothing, and latrines, of a very primitive design, are frequently erected on the banks and drain into the tanks. The water is, of course, under these circumstances, highly charged with foul organic matter, and totally unfit for use.

It appears that, from time to time, there have been observed localized epidemics of cholera which prevailed among the people living in the vicinity of these

water tanks, and the resident physicians had already sought to establish a relation between the drinking water and these localized epidemics.

One of these epidemics occurred while Koch's investigations were in progress, and it was found that the tank water was used in the usual manner for bathing, washing, and drinking purposes; and that the soiled clothes of cholera patients were also cleansed in the tank. Cholera bacilli were found in tolerably large numbers in the tank water during the epidemic. Now many other examinations of tank water, sewage, river water, and various specimens of dirty water, where cholera was not raging, were made with negative results. Whence Koch concludes that the localized epidemics of cholera are due to the drinking of tank water infected by cholera washings.

Koch also considers that these facts supplement those already adduced to show that cholera is the result of a special bacillus, and in a measure make up the proof which could not be obtained through experiments on animals.

Experiments were also made as to the influence of various germicides, as corrosive sublimate and carbolic acid, on the development of the cholera bacilli in culture-fluids, as well as to the behavior of the bacilli when excluded from the air, and when surrounded by carbonic acid gas, but the results are not reported.

Experiments with a view to discovering a permanent form of the cholera bacillus, corresponding to that of the indestructible spores of other bacilli, were also made, but without success.

PREVENTION OF INFECTIOUS DISEASES IN SCHOOLS.

THE Austrian Minister of Instruction, Baron Conrad, has just issued to all the school-boards of the realm, a stringent order in relation to the prevention of the spread of infectious diseases in schools, which, if rigidly enforced, will tend to reduce the amount of sickness and the death-rate from these affections. By this action one is led to infer that this important part of the supervision of the health of the school children has heretofore been neglected, and that some outbreak of disease has suggested the authoritative intervention of the Government. The action is commendable and worthy of imitation by people claiming a more enlightened school administration.

By this decree the director of a school is held responsible for the most watchful supervision of the health of the children entrusted to his care. Every pupil suffering from an infectious disease is obliged to absent himself from school until his return is assured, by competent authority, to be without detriment to the other children. Likewise, also those persons, teachers or scholars, who in anywise have been exposed to the influence of infectious diseases, are obliged to remain away from school until it is established that their return will work no harm to the pupils.

It is made obligatory upon the director of a school to report immediately to the authorities, every case of infectious disease occurring among his pupils. Should disease of a contagious nature assume an epidemic character among the children of a locality, power is given him, in conjunction with the sanitary authorities, to close a class, or even the entire school. The director of a school is also enjoined to coöperate with the local health board in promptly removing any case of contagious disease which may have occurred among the occupants of a school-building; and, should it be advisable, the school must be closed and not reopened until after a thorough disinfection has taken place. Care is enjoined in regard to the use of disinfectants, and the children are to be properly guarded from their misuse.

Scholars are not to be permitted to visit houses in which infectious diseases are known to exist; and no public funeral is to be allowed when death has resulted from such an affection. Public notice of these rules is to be given at the beginning of every term and at the outbreak of an epidemic. Children's asylums and kindergartens come under the same regulations.

The Minister of Instruction has also issued special directions upon the subject of disinfection, which comprehend the present well-known measures and practices applicable to the sick-room, buildings, open spaces, sewage, body- and bed-linen, and clothing, water, etc., to which further allusion is unnecessary.

Specific instructions, such as the foregoing, emanating from the central government, which has the authority and power to compel their observance throughout the entire empire, give promise of comprehensive and most beneficial results. An experiment on so large a scale will be watched with the deepest interest, and will exert an influence upon school administration in other countries.

EXCISION OF THE PATELLA.

MR. DODD, of Newcastle-on-Tyne, reports in the *Lancet* for March 22, 1884, an interesting example of excision of the patella for caries, in which the joint was freely opened, and recovery ensued with a movable articulation. Instead of being the first recorded case of excision of the patella, with preservation of the functions of the joint, as Mr. Dodd thinks, we may call attention to the fact that Dr. O. B. Knode, of St. Joseph, Missouri, removed the bone for necrosis, with a similar result, and that the full details of the case may be found in the *North American Medico-Chirurgical Review* for May, 1860.

SOCIETY PROCEEDINGS.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 17, 1884.

The Vice-President Horace T. Hanks, M.D., in the Chair.

Dr. Robert Abbe read a paper entitled

A STUDY OF DUPUYTREN'S CONTRACTIONS OF THE HAND.

In it, he said, he referred to those contractions of the fingers which were formerly regarded as of a tendinous nature and considered irremediable until Dupuytren demonstrated their true character. Having demonstrated the palmar fascia and its digital prolongations, Dr. Abbe went on to say that Sir Astley Cooper really first discovered that this was the tissue involved in the contractions, but this remained practically unknown until Dupuytren made his famous dissection in 1832. In the report of his clinical lectures it is stated that the skin having been removed from the whole extent of the palm of the hand and the palmar face of the fingers, the fold or puckering of this structure entirely disappeared; it was, therefore, very evident that the arrangement which presented during the disease did not depend on this cause, but was communicated to it. The dissection being continued, the Professor discovered the palmar aponeurosis extended, retracted, and diminished in length, its inferior part being divided into cords, which passed on to the sides of the affected fingers. He cut the prolongations on the sides of the fingers, and immediately the contraction ceased, the fingers returned to a state of semiflexion, and, by slight force, to complete extension. The tendons were natural, the sheaths were not open, the articulations, ligaments, synovial membranes, and bones were in their normal state.

Since then, Dr. Abbe said, a dozen similar dissections had been made, and they demonstrated also that the tendons were unaffected, the bones and joints entirely free from disease, and the seat of the trouble confined to the aponeurosis alone. He then exhibited drawings of three dissections. The first was taken from Druitt, the original specimen being in the Museum of King's College, London. It was the dissection of a contraction of the little finger, showing a contracted band of palmar fascia, stretching across like the string of a bow, and the flexor tendons lying deeply along the concavity of the curve, close to the bones. The second drawing represented a dissection preserved in the Museum of St. Bartholomew's Hospital, and the third, Goyrand's dissection, taken from Billroth's work. The description of the latter agreed very closely with that of Dupuytren, although Goyrand regarded the lateral bands extending along the phalanges not as digital prolongations of the palmar fascia, but abnormal fibrous fasciculi, which extended from the fascia to the sheaths of the flexor tendons, into which they were inserted opposite the second phalanx.

The affection, Dr. Abbe continued, was one which rarely occurred before middle life. Two years ago Dr. W. W. Keen, of Philadelphia, had published an article on the subject in which he collected all the cases at that time on record, as far as he could ascertain, one hundred and five in number, and the average age of the patients at the time the trouble commenced was forty years. It was also comparatively rare in women, the proportion of female cases being about one in twelve.

Dr. Abbe then gave a sketch of the clinical history of the disease, in which he stated that in the first stage there appeared a flattened nodular induration on the metacarpo-phalangeal articulation, the skin not being adherent to the thickened palmar fascia; in the second stage a thickened band of fascia, extending towards the finger, could be felt, and the skin became adherent, and in the third stage there was increased thickening of this band and of the fascia, while there was also formed another band leading towards the annular ligament of the wrist, and the finger or fingers were gradually drawn down towards the palm of the hand. Mr. William Adams, he said, had given the best *résumé* of the subject which had as yet appeared, and he quite agreed with this authority in his opinion that the facts relating to the anatomical conditions, as well as the clinical evidence presented in Dupuytren's finger-contraction all agreed in negativing the supposition that the tendons or sheaths of the tendons were involved in these contractions. Like the tendons, the contraction-bands had arched fibrous sheaths; in the second place, they were not always on a line with the tendons; and, in the third place, when the bands were divided, the patient was immediately able to flex the finger or fingers as strongly as before the operation. Dr. Keen's figures showed that the ring finger was affected in eighty-eight cases, and the little finger in seventy-seven, while the index and thumb were affected in only thirteen and nine cases respectively.

In connection with the contraction of the fingers there were often associated pains, not only in the seat of the trouble, but also in other parts of the body. This was well shown in several of Dr. Abbe's cases, the histories of which he now proceeded to relate in detail. The first case (which, he said, had been previously reported) came under his observation in 1881. The patient was a cloth-cutter by trade, who had been suffering from marked contraction of the little finger for seven years, and slight contraction of the ring finger for one year. Two weeks before the operation the right hand had begun to be affected also; but all trouble at once disappeared in it, and in six months the man was able to resume his occupation.

The second case was that of a German, fifty-eight years of age, and also a cloth-cutter. Both hands were affected: in the right the ring and little fingers, and in the left the ring finger alone, and he attributed the trouble to pressure on the fingers. He had been a cutter for twenty years, and fifteen years ago the left ring finger had begun to be affected. Soon afterwards contraction of the right ring finger also commenced, and after a time he began to suffer very greatly, in addition, from "lame back." Although greatly crippled, he had pursued his occupation until three years before, when he was obliged to give up all work. He suffered so intensely from pain in the back that he placed himself under the care of Dr. Seguin, who, in connection with Dr. Gilvey and Dr. Amidon, applied the actual cautery, ice-pack, and electricity, both statical and galvanic, with little or no relief; and they believed him to be suffering from organic spinal trouble. Finally, on account

of the contraction of the fingers existing in connection with the rachialgia, the patient was referred to Dr. Abbe, who had then published his first case. On the 24th of June, 1882, he performed Adams's operation, making six subcutaneous cuts in the left hand and four in the right, and applying straight splints. There immediately followed considerable amelioration of the pain in the back, and by the 4th of July, the tenth day after the operation, the improvement was so marked that he could stoop freely, and said that if his hands had not been confined in the splints he would have been able to dress himself, something of which he had been incapable for a long time. The man had subsequently been completely restored to usefulness. The case had been carefully watched for two years, and there had been no relapse of the deformity or the pain in the back; every point gained by the operation having been retained. Casts and drawings of the case were exhibited, and Dr. Abbe also presented the patient himself, who was seen to have perfect flexion and almost perfect extension of the fingers of both hands.

In the third case the patient was fifty-seven years of age, and suffered from double Dupuytren contraction. His mother had also suffered from contractions of the fingers, but had never had gout, so far as known. The right hand had been affected nine years, and he attributed the origin of the trouble to injury to the palm of the hand in ball-playing when a youth. The ring finger of the left had begun to contract three years before, and had afterwards been successfully operated on by another surgeon. The right hand had not been treated, and was found to be the seat of very marked deformity, the thumb, as well as all the fingers, being involved. Besides the deformity, there was a grave sub-inflammatory condition of the parts, with excessive tenderness; in consequence of which the patient was rendered almost helpless and suffered, in addition, from great mental depression. He was operated on in February, 1883, and twenty-five subcutaneous divisions were necessary in order to release the fingers entirely from the contracted bands of fascia holding them down. The hand was dressed antiseptically and placed, in a position of extension, in plaster-of-Paris. Severe cellulitis and œdema followed, however, and it was two weeks before the inflammatory condition set up by the operation subsided. Excellent flexion resulted, and at the end of one year and two months all that had been gained by the division of the contraction-bands was found to have been retained; while the patient had completely recovered his spirits, and his wife stated that he was now in better general condition than he had been for years.

The fourth patient was sixty years of age, and had had the trouble for fifteen years. Fifteen years ago, he had met with a slight cutaneous laceration on one of his hands, and within two months afterwards he noticed that a bunch had formed. The ring and little fingers of both hands afterwards became contracted. Early in February last, Dr. Abbe made twenty subcutaneous cuts in the palm of each hand, and applied an antiseptic dressing. For two weeks he kept up pretty full extension with splints, and during this time there was a condition of the hands somewhat resembling subacute rheumatism. This, he believed, was the result of nerve irritation incident to the operation. The patient was now presented to the Academy, at the end of nearly eleven weeks after the operation, and although very considerable gain was found to have been made (as shown by the casts and drawings taken before the operation), the cure was not as yet complete. The trouble, Dr. Abbe explained, was not in the flexing of the fingers, but in the condition of the fibrous tissues generally, the result of the disease, which it would require considerable time to overcome.

The fifth case was that of a retired physician. He was sixty-one years of age, and had never had gout or rheumatism. The trouble had begun one year ago, and the ring fingers of both hands were now contracted. No operation had as yet been performed. The sixth case occurred in a female, who had contraction of the ring finger of the left hand, and the seventh was the result of a sprain. The eighth patient was a female, sixty-five years of age, who had contraction of both hands. She suffered from burning sensations in them, but had no neuralgic pains. The ninth case, in a man fifty-two years of age, showed well-defined palmar cords and puckered skin, and was associated with marked writer's cramp. The patient refused operation. In the tenth and last case, the patient, who was sixty-one years of age, had a gouty and rheumatic family history, and suffered much from neuralgia of the palm of the hand and pain in the back.

After a careful study of these cases, Dr. Abbe said that he would suggest the following points as a working hypothesis of the causation and character of this disease:

First. A slight traumatism, which often entirely escaped notice.

Second. A spinal impression produced by this peripheral irritation.

Third. A reflex influence to the part originally affected, producing insensible hyperæmia and nutritive changes, and resulting in thickening of the palmar fascia and the formation of contracting bands.

Fourth. Through the tissue-contraction the production of a secondary series of nervous disturbances, usually of a neuralgic character.

This hypothesis, he thought, offered a more satisfactory explanation of the manipulations of the disease than the opinion that it was essentially dependent upon the gouty diathesis, as held by Mr. Adams. In connection with the etiology, he referred to the nerve theory of acute rheumatism, as advanced a number of years ago by Dr. J. K. Mitchell, of Philadelphia, who contended that rheumatism was dependent upon peripheral irritation, and he also quoted the opinion of S. Weir Mitchell and other authorities in regard to arthropathy. Some of his cases, he said, showed the most extraordinary relief from neuralgic symptoms resulting from the operation for the finger contraction, and he had little doubt that in this affection the local condition was, as a rule, responsible for trouble that had generally been regarded as of a rheumatic character. The traumatism on which he believed the disease depended was usually so slight as to be lost sight of altogether; and where the contractions occurred in those habitually using the hands in the same kind of manipulations, it might have been only at the thousandth repetition of the act that a nerve filament became affected. The symmetry of the affection had been advanced as an argument of its being a gouty or other blood-disease; but this lost its

force altogether when it was remembered how sympathetic ophthalmia was produced through the agency of the ciliary nerves. In Dr. Keen's 105 cases, the presence or absence of the gouty diathesis was mentioned in only 48; but it was stated to be present in 42 out of the 48. This was certainly a very much larger proportion of gouty cases than he had found among his own patients, and he thought that this apparent excess of such cases was probably explainable by the fact that in by far the largest majority of the remaining fifty-seven cases there was no gout, since, if it had been present, the circumstance would undoubtedly, as a rule, have been noted. In a recent communication Mr. Adams had reiterated his conviction of the gouty origin of the disease, but it was not to be forgotten that his practice was almost exclusively among the upper classes of Englishmen, in whom gout was exceedingly common. Noble Smith, on the other hand, had found that gout was the exception, rather than the rule, in connection with Dupuytren's contraction.

In the treatment, Dr. Abbe advocated the multiple subcutaneous incisions as first resorted to by Mr. Adams. He said he had one important suggestion to make, however, and that was, not to keep up too forced extension, lest active inflammation should be set up, on the old theory, *ubi irritatia ibi fluxus*. The operation, as had been previously noted, not infrequently produced a temporary condition of the hand resembling acute rheumatism. In conclusion, he alluded to the treatment of Professor Busch, of Bonn, as described by Dr. Madelüng, which consisted in the raising of a triangular skin-flap from the palm of the hand, with its base at the root of the finger, and the cutting away bit by bit of the tense fascia beneath, as the finger was being straightened; after which the flap was replaced and fixed with sutures. The finger was left free for some days after this operation, but as soon as granulations appeared, a cylinder of wood was placed in the palm for a few days, and after this the finger was extended and kept so by means of a straight splint applied to the back of the hand. This was to be removed daily, and the finger moved, and at the end of three or four weeks the hand left free. Dr. Abbe had had no personal experience with this plan of procedure, but he thought that Mr. Adams's method left nothing to be desired.

Dr. R. F. Weir said that he had had the opportunity of seeing a number of Dr. Abbe's cases, and from noting the connection of nervous symptoms with this affection he had become convinced of the correctness of his views concerning it. Traumatism, he had no doubt, was the starting-point of the whole trouble. Dr. Abbe's latest departure, in not stretching the fingers all the way back to the normal position at first, he thought a wise one, as in this way less irritation would be caused by the operation.

Dr. Alfred C. Post said that he believed he was the first American surgeon to direct attention to this subject, though of late years he had not met much with such contractions. It had often been a matter of surprise to him that before the time of Duyputren the complaint described by him should have been mistaken for contraction of the tendons, since it was noticeable that in Dupuytren's contraction it made no difference in the position of the fingers—whether the wrist or elbow was in a flexed condition or not—which would certainly not be the case if the tendons were affected. In his own operations he had employed open section with success. He had found no difficulty in extending the fingers, but a considerable period of time was required before flexion could be secured. All his cases had been of traumatic origin, and the affection generally occurred in those who were unaccustomed to manual labor, but who took up some kind of work for purposes of exercise or recreation in which the palm of the hand was exposed to unusual pressure, such as rowing, gardening, etc. There was thus a bruising of the palmar fascia, but there was, he believed, no gouty or rheumatic element in any of the cases. It was the tissues over the metacarpophalangeal articulation that were mainly affected, and in one instance he had found it necessary to divide the sheath of the tendon, although the tendon itself was not at all implicated in the trouble.

Dr. Frank H. Hamilton remarked that for a number of years he had not been called on to treat such cases. He had formerly followed Dupuytren's advice in their treatment to a certain extent, but he could hardly say that his results had been altogether satisfactory. He thought Dr. Abbe deserved great credit for the enunciation of the theory which he had advanced on this occasion, and said that for many years the idea had been in his mind that this affection might perhaps be of neurotic origin. The morbid symptoms noticed seemed to him to be due to certain lesions, in consequence of which the annular tissue of the parts underwent an atrophy analogous to the contracture of tendons. In tendons, the latter process resulted in an absolute shortening, and, according to Malgaigne, it took about a year before the contracture occurred. The process, in Dupuytren's contraction, he thought, was not of an inflammatory nature, but one of atrophy, in consequence of which the skin became adherent to the fascia beneath. This would explain why a long time must intervene before power could be regained in the part. The theory of Dr. Abbe seemed to him sound on the whole, but he had to confess that there was a little doubt in his mind whether the affection were of traumatic origin in all cases. It was a recognized fact that it almost always occurred in the little and ring fingers, and in connection with this it had been pointed out that in England it was quite frequently met with in coachmen, who used their other fingers to a great extent and kept these almost constantly at rest; so that the element of traumatism seemed removed from this class of cases. In certain instances, therefore, persistent disuse apparently resulted in this atrophic condition which he believed to belong to Dupuytren's contraction.

Dr. Lewis A. Sayre said that he had unfortunately arrived in time only to hear the very end of the paper, but as far as he was able to judge of the views of Dr. Abbe from its conclusion and the remarks of those who had taken part in its discussion, he could only give them his hearty endorsement. All the cases that he had ever met could be traced to a traumatic origin, and in every instance a certain amount of pain in the part had preceded the deformity. This pain varied in character in different cases, and in some it was rather a tingling sensation or a vague feeling of discomfort than actual pain. After it had been noticed for several months the deformity occurred. A similar explanation to that advanced by the author of the paper had seemed to him

to be the correct one; but he had never publicly expressed such views on the subject, and, like Dr. Hamilton, he thought Dr. Abbe entitled to great credit.

The treatment advised and practised by Dupuytren was not always successful, and he did not wonder that Dr. Hamilton had not been altogether pleased with it; but the plan of procedure devised by Mr. Adams was perfectly satisfactory in every way, and he had obtained the most excellent results with it. The idea of Dr. Hamilton that there was an atrophy in connection with this affection he thought a very important one, and this would explain why it was so desirable to combine systematic massage and general manipulation with the treatment. In two cases of his own he had obtained the most excellent results by these measures alone, without resorting to any operation whatever. The skilful practice of massage for half an hour twice each day, would be found of incalculable service in restoring the vitality and nutrition of the parts. Dr. Sayre also exhibited a plaster cast of one of his cases.

DR. V. P. GIBNEY stated that it had been his good fortune to see the cases in which Dr. Abbe had operated both before and at different times after the operation, and he could bear witness to the very gratifying character of the results obtained. He had had one or two cases himself, and the painful and distressing neurosis with which they were accompanied left no doubt in his mind of their neurotic origin. In club-foot also, when the fascia was very tense, he had adopted Adams's plan, with very good results.

DR. A. L. RANNEY spoke in confirmation of the extent of the palmar aponeurosis, especially as regards the thumb, as claimed by Dr. Abbe in his paper, and said that he had verified it by his own dissections. Dupuytren's contraction, he went on to say, occurred in women more frequently, he believed, than was ordinarily supposed. Thus, Dr. Keen, in a subsequent communication, had reported twelve or fifteen additional cases in females; which would bring the proportion up to about one case in five. He could not but subscribe to the neurotic origin of the affection, and said that he believed Adams and Rowe's gouty hypothesis was untenable. Dupuytren himself had reported two cases in which the disease was congenital, and as he had never yet heard of a young infant being affected with gout, these seemed to him to argue against such an origin. The question of traumatism as a cause of neurotic trouble was one of interest, and he was inclined to take somewhat the position of Dr. Hamilton in regard to it. No one to-day, he thought, doubted the neurotic origin of writer's cramp; yet this was due to spinal irritation without traumatism. He himself had suffered from the affection, and in very many cases he had found that it occurred in those who were accustomed to do only an ordinary amount of writing.

That the part of the hand supplied by the ulnar nerve was more often affected was due, he believed, not to the cause assigned by Dr. Hamilton, but to the fact that the ulnar nerve was more exposed to injury than the radial. Thus, it was exceedingly common for men particularly to lean on the elbows, and the nerve at this point was peculiarly liable to be pressed upon. As a whole, he believed Dr. Abbe's views were correct; but it might, perhaps, be well not to insist on their absolute applicability to every possible case. There was always more or less danger, in taking up a new idea, of attempting to carry it out too far. Might not compression of a terminal nerve-filament, rather than continued hyperæmia, sometimes result in the contraction in question? In some cases, again, the gouty diathesis might perhaps, be a very important element in the etiology. That the affection was often symmetrical, however, pointed, he thought, rather to its neurotic than its gouty origin. Every one was familiar with the effect produced simultaneously upon the circulation of both ears of a rabbit by pinching one of them, which effect was due to a spasm of the vaso-motor nerves. A distinct anastomosis between the two anterior columns of the spinal cord had now been established, and therefore it was not difficult to see how a compression of the ulnar nerve, for instance, in one upper extremity, should produce the same results in both.

DR. AMIDON spoke particularly of the brilliant results achieved in Dr. Abbe's second case, in which the patient suffered so long and so severely from the trouble in the back, and in which he himself, in connection with Dr. Seguin, had tried so many different measures without affording any satisfactory relief. He then went on to say that, with Dr. C. H. Knight, he had seen that day a very interesting case of contraction of both ring fingers. The patient was a man, sixty years old, who, up to the age of forty, had pursued the occupation of a waiter, but for the last twenty years had been a drayman, and constantly accustomed to handling a balehook. The contraction in the right hand was of eight years' duration, and that in the left hand of two or three years. There was also a peculiar neurotic history in the case. Within the last two weeks the patient had had two attacks of sudden failure of power in both lower extremities, but without any loss of consciousness, or true paralysis, either of motion or sensation. The first one occurred in the evening, and he was not able to stand on his legs until ten the following morning. The second attack of loss of power of standing lasted only about two hours. The coincidence of this neurotic trouble with typical Dupuytren contraction of a symmetrical character, seemed to him of considerable interest.

DR. POST remarked that the explanation of the more frequent occurrence of the affection in the little and ring fingers seemed to him to be due to the fact that the portion of the palm of the hand with which they were connected, what was known as the thenar eminence, was more exposed than the rest of the palm, to blows or pressure, as in rowing, handling tools, walking with a cane, etc.

DR. ABBE stated that it afforded him great pleasure that his paper should have elicited so interesting a discussion, and also that his views should have received the endorsement of so many of those present. It was his conviction that, scattered throughout the country, there were a great many cases of Dupuytren's contraction, in which it was believed that the tendons were actually contracted, and, therefore, that nothing could be done for their relief. After Madelüng had published the account of Busch's successful operations, crowds of such patients came flocking to Bonn, and received the benefit which surgical interference was able to afford, and which they had hitherto supposed it was impossible to obtain. After Dr. Post published his cases eight or

nine years ago, the subject had been allowed to drop to a great extent from the mind of the profession, until it was recently revived by the London surgeons and the interesting contribution of Dr. Keen, of Philadelphia, referred to in the paper. In his remarks, Dr. Post had spoken of the slow return of flexion after the operation. This was a very noticeable feature of these cases, and the reason for it was that the fibrous tissues became so hardened in this affection that it took a year or more to restore the parts to their normal condition. He could not agree with Dr. Hamilton that there was simply atrophy present, but believed that there was positive inflammation, commencing in hyperæmia and resulting in more or less hyperplasia. Dr. Sayre, he thought, had over-rated the importance of massage in this disease, even in its early stages; since, in his fourth case, upon which he operated eleven weeks ago, the patient, who had been affected with it for fifteen years, had faithfully tried this, in addition to many other measures for relief. Massage, however, he thought, was much preferable to stretching. Dr. Ranney's idea, that the ulnar nerve, which supplied the fingers most likely to be affected, was peculiarly exposed to pressure, seemed to him a very suggestive one. That the peripheral nerve filaments were sometimes involved, was probably true, but he thought that there was a real nerve lesion, and not merely a sensory impression.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, April 8, 1884.

The President, R. F. Weir, M.D., in the Chair.

LIGATION OF THE SAC IN STRANGULATED HERNIA.

Dr. J. C. Hutchison reported two cases of strangulated hernia in which he had operated recently. Both the patients were females. One hernia was femoral and the other a direct inguinal. After dividing the stricture and returning the contents of the sac, he surrounded the sac in one case with a carbolized silk ligature, and then cut it off. The first patient had recovered entirely, and the second, still under observation, was doing well; her temperature at no time having been above 99°. He made no attempt to close the ring.

Dr. T. M. Markoe then read a paper entitled

SARCOMA OF SYNOVIAL SHEATHS.

(See page 464.)

At the close of the reading of the paper, he referred to a case in which Dr. W. T. Bull had opened the knee-joint for the removal of a loose cartilage. The body was found imbedded in the edge of one of the synovial fringes, which floated into the wound as the turbid, bloody serum contained in the joint flowed out. The body was spherical or ovoidal in shape, about as large as two peas, and of a cartilaginous hardness. On section after hardening, the microscope showed the tumor to be composed of some small round cells, many spindle cells, and a large number of giant cells, marking it as a sarcoma giganto-cellulare as Virchow terms these tumors, or, as they are more familiarly known, as the myeloid sarcoma of Paget. The case seemed to Dr. Markoe to have an interesting analogy to those which he had related.

Microscopical sections, prepared by Dr. Peabody, illustrating each of the tumors described were then exhibited.

The President said that he had the good fortune to see one of the cases which Dr. Markoe had related, and shortly afterwards he had a case which he saw at his clinic at the College of Physicians and Surgeons. A young Italian girl presented herself with an obstinate broad ganglion on the dorsum of the hand near the wrist. The patient subsequently entered the New York Hospital, and was operated upon by Dr. Peters. The tumor was found to encircle the tendons. She had been seen lately by Dr. Abbe, who reported a recurrence of the growth. Microscopically the neoplasm was sarcomatous.

FRACTURE OF THE NECK OF THE FEMUR.

Dr. A. C. Post said that he had recently seen a case which illustrated the difficulty which is occasionally observed in the diagnosis of fracture of the neck of the femur. Two weeks ago a lady, about seventy-seven years of age, a well-preserved and healthy person, fell one or two steps going down stairs, and immediately afterwards was unable to walk, and complained of pain in the region of the hip, but did not send for him until the next evening. When he saw the patient she was lying upon her back, the affected limb appeared very slightly everted, but on careful measurement he could not detect any difference in the length of the two limbs. He gave a guarded diagnosis, and said that there was possibly a fracture of the neck of the femur without separation of the fragments, and advised the patient to remain quiet. He visited her several times afterwards and found her in about the same condition, except that she gradually grew more comfortable, was able to move about in the bed without much discomfort, and after the lapse of about ten days, everything going on favorably, he nearly abandoned the idea that fracture had occurred. He therefore allowed the patient a little more liberty, such as sitting in a chair, and by the aid of assistants she might move a little about the room, and she did so.

Dr. Post saw the patient this morning, found her sitting on a chair, complaining of no pain, and with his assistance and the aid of an umbrella used as a cane, she was able to walk very slowly across the room. This evening he received an urgent call to see her, with the statement that she had suddenly become very much worse, was suffering severe pain, and when he reached the case he found that there was more marked version of the foot, and that there was shortening of the limb to the extent of about seven-eighths of an inch. The account given was that while sitting up some friend called, and suggested that she raise her foot and place it in another chair, which she did, and was not conscious of having injured the limb, but when she attempted to return to the bed, she immediately began to suffer from severe pain, and Dr. Post found the condition described, which did not exist at his morning visit. He then reached the conclusion that it was originally a case of fracture of the neck of the femur without separation of the fragments; that the fragments were held together by the thick periosteum of the neck, and probably the movement made when she raised her foot and placed it in another chair separated the fragments and allowed them to pass by each other.

He also recalled a case which occurred many years ago in the old New York Hospital. The patient was brought in after having received an injury, and he was unable to make out any shortening of the limb, although there was some eversion and a good deal of lameness. He gave the patient the benefit of the doubt concerning fracture, and did not make any extension or special manipulation for the purpose of diagnosis. It was near the end of his term of service, and he was followed by one of his colleagues, who, when he came on duty, was anxious to have a clear diagnosis, and therefore proceeded to make some extension and further manipulation of the limb, and subsequently there was no doubt whatever concerning the nature of the injury.

Dr. Post had been in the habit of treating such cases as cases of fracture until the diagnosis became clear, or until the patient got well. He thought that the case reported suggested the great importance of caution in that respect, and of being contented with uncertain diagnosis rather than subject the patient to the danger of separation of the fragments, which cannot afterward be brought together.

THE PRESIDENT remarked that Dr. Post's case of fracture of the femur was very interesting and practical in several particulars, especially with reference to the difficulty in making a diagnosis, which, in more than one instance, he had himself experienced. He thought that where the patient is thin, and Bryant's line can be made out distinctly, and there is, also, a relaxation of the fascia lata, sometimes a diagnosis can be made clear in this manner; but he had to confess that, practically, the rule laid down by Dr. Post must be followed, and that the case should be regarded as one of fracture until such a period had elapsed as would show unquestionably that only a contusion of the muscles had existed. Attempts to elicit crepitus should be made with great caution.

DR. L. A. STIMSON thought that the need of caution might be formulated even more strongly, and it might be said that when an elderly patient has fallen and struck upon the hip, with consequent inability to use the limb, unless absence of fracture can be positively made out, a diagnosis of fracture should be made; and the absence of fracture can only be asserted when all its minor indications are absent; as Prof. Bigelow has pointed out, when no eversion can be recognized, there may be diminished inversion. Another sign, recently pointed out by a French surgeon, Hennequin, which Dr. Stimson had never failed to find in any case of fracture at the hip-joint since he had learned to look for it, was a lack of depressibility of Scarpa's space—that is, the fingers can be pressed into that space less deeply than normal, and the manipulation is always accompanied by pain in cases of fracture.

A case came under his observation a few days ago, in which there was no eversion, no shortening, but there was inability to use the limb. There was a fulness of Scarpa's space, and he was able, by gently flexing the limb to a right angle with the pelvis, and pressing on the trochanter, to get a single click of crepitus, which made the diagnosis complete. He had been unable to get the crepitating click with the limb in an extended position.

Dr. Stimson asked the President if he had noticed the lack of depressibility of Scarpa's space.

THE PRESIDENT replied that he had tried it in only two cases, and it was present in each instance, but that he did not rely upon it as a pathognomonic system.

He also supplemented the case by proposing an inquiry with regard to the treatment of impaction with extreme eversion. He had seen two cases in which the eversion was so marked in subjects under fifty years of age, that he was strongly tempted to break it up, so as to get a better position for the limb; but he did not dare to do so, and the result apparently justified him in his decision, because the patients subsequently walked fairly well—much better than he expected they ever would.

DR. J. C. HUTCHISON said that in his own case, an impacted fracture of the femoral neck, there was at first great doubt whether or not fracture had occurred. He was carefully measured by three competent surgeons, one of very large experience, who made out three-fourths of an inch shortening; one of the others found some shortening; the third examined in the presence of the other surgeons, and also alone several times, and was unable to make out any shortening. Dr. Hutchison had the conviction that he had an impacted fracture, but he was not satisfied that a fracture had occurred until six or seven hours after the receipt of his injury, when symptoms developed which convinced him that a fracture had occurred, namely, spasmodic contraction of the muscles about the hip, when he fell asleep, which continued from time to time for a week. He was disposed to regard the presence of muscular spasm about the hip-joint, after severe injury of that part, as pathognomonic of fracture, but fracture here often exists when this symptom is absent. On the following day two of the three gentlemen had no doubt concerning the existence of a fracture. The fragments did not separate although he was removed from Lake George to his home soon after the injury. Dr. Hutchison agreed with the opinion expressed by other members, that when the diagnosis was doubtful in injuries about the hip, the case should be treated as one of fracture.

INTESTINAL OBSTRUCTION.

DR. POST related a case of intestinal obstruction to which he was called on the twelfth of March. The patient was a previously healthy man, thirty years of age, and when Dr. Post first saw him the abdomen was very much distended, with tympanitic percussion noted everywhere except over the ascending colon, where there was a moderate degree of dulness without marked hardness upon palpation. The patient had had no movement of the bowels for four days. There was a moderate amount of fever with considerable tenderness, and the pain was quite acute. He directed an enema prepared by infusing two ounces each of senna and Glauber's salt with half an ounce of cardamom seeds in a quart of boiling water, and ordered that one-half of the enema be administered, to be followed by an opiate. On the following morning he found that the patient had had an imperfect evacuation following the enema, and Dr. Post directed that the other half of the infusion be given, which brought away some solid matter with the liquid. Partial relief was afforded, but there was evidently a large accumulation of gas in the intestine, and he therefore directed, on the following day, that half an ounce of oil of turpentine and one drop of Croton oil,

added to a pint of flaxseed tea, be used as an injection, and it gave the patient complete relief, producing several copious evacuations, and the swelling of the abdomen subsided. The patient improved so steadily that on the eighteenth of March he discontinued his visits.

Six days afterwards, the patient's wife called, saying that her husband was suffering again, and that a hard swelling appeared the day after Dr. Post discontinued his visits, which had continued, and that his bowels had not been freely moved. Dr. Post found that there evidently was a phlegmon forming in the region of the cæcum. A swelling existed there larger than his fist, and there was dulness on percussion. Although there was no distinct fluctuation, it was evident that the tumor was tending toward the formation of pus. He concluded to perform the explorative operation of Dr. Willard Parker, and, on the 25th of March, he made an incision, separating layer after layer, until he reached the immediate vicinity of the hardened mass; and, not detecting fluctuation, he made an antiseptic application—bichloride solution, eight grains to a pint—over the wound, and from that time the patient began to experience relief. In the course of two or three days, there was a moderate discharge of pus from the wound, and the hardness subsided. The patient is now in a very good condition, and in a fair way to recovery. The discharge had been carefully inspected, but no foreign body had been found.

It was on the sixth day after hardness had been observed that Dr. Post made the incision, and he anticipated, he thought, somewhat the actual formation of matter which readily found its way into the artificial opening. He regarded it as safer to proceed in this manner, rather than to take the chances of an abscess opening into the peritoneal cavity.

The President remarked, with reference to Dr. Post's case of perityphlitis, that he had recently seen a case occurring in a young person, twenty-two or twenty-three years of age, in which the especially interesting features were the presence of normal temperature and resonance on percussion over the tumor. At first there was some fever, with constipation of the bowels and severe abdominal pain; but these symptoms soon disappeared, and after the temperature fell to the normal, the tumor first showed itself, and when he saw the case yesterday in consultation, the pulse was eighty-four, the temperature was normal, the tumor was in the right iliac fossa, but extending well up towards the median line, and was resonant on percussion. He had once seen a similar case under the care of the late Dr. Gurdon Buck, and the explanation which Dr. Buck gave with reference to resonance on percussion was the presence of gas in the cavity of the abscess.

In the present case the diagnosis was made sure by thrusting in a hypodermic syringe, which withdrew pus, and afterwards an incision was made in the line of puncture, and gas and pus abundantly evacuated. No foreign body was found in the cavity. The discharge was exceedingly offensive, although the pus had a good color.

Dr. C. K. Briddon had seen two or three cases of perityphlitic abscess in which there was resonance over the tumor, and the gas which escaped was also very offensive in character. He had also seen a case of iliac abscess as described by Dr. Buck, which was filled with gas, and for the relief of which he performed the operation devised by Dr. Buck, namely, to operate below Poupart's ligament, extending the incision down to the tendons of the psoas and iliacus muscles, opening the fascia over these tendons, and passing the finger up underneath the fascia into the iliac fossa. In this instance he passed his index finger to its entire length without getting any response, he then took a female catheter and introduced it to nearly its entire length when there came a full puff of offensive gas, and he had the impression that he had punctured the intestine, but it was not so, for the puff was quickly followed by a large discharge of pus. The patient recovered. He eventually died, however, of tuberculosis.

Dr. Post referred to a case of intestinal obstruction due to impaction of feces in the rectum, occurring in a woman eighty-five years of age. She had gone repeatedly to the water-closet, and had passed small quantities of mucus. On digital examination the rectum was found to be filled with a solid mass of fecal matter. Portions of this were removed with the handle of a spoon, and this was followed by a warm water enema which gave complete relief.

Dr. Post also referred to a case of constipation in a lady who had given birth to a child twelve days before. She had had frequent liquid evacuations, and her attending physician had regarded it as a case of diarrhœa, for which he had prescribed opiates. When Dr. Post was called, he made a digital examination and found scybala in the rectum. The patient was relieved by an active cathartic.

The Society then proceeded to the transaction of miscellaneous business.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

Eighty-sixth Annual Meeting, held in Baltimore, April 22, 23, 24, and 25, 1884.

(Specially reported for The Medical News.)

Tuesday, April 22, First Day.

The Faculty convened shortly after 12 M. in Hopkins Hall of the Johns Hopkins University, The President, Richard McSherry, M.D., in the Chair.

After the transaction of some routine business, Dr. McSherry delivered

the president's address.

He commenced by referring to the time-honored custom that required him to give an address at the opening of the convention, and proceeded to speak of the many changes that had come about in the Faculty, not only since its foundation, but since he became a member, thirty-three years ago. Amid all other changes one change has been constant, "The shears of Atropos have been busy clipping the life-threads of our fathers and brothers." We are never allowed to forget the fact so forcibly expressed by the Latin poet:

"Debemus morti nos nostraque."

Speaking of the progress of medical science, the President said that while keeping pace with all true progress, we should at the same time "keep in perpetual use a sort of mental winnowing machine, to separate

the wheat from the chaff so abundantly placed before us." Neither personal observation alone, nor scientific research alone, should be trusted to, but the utmost use should be made of both, ignoring neither the wisdom of the past nor the discoveries of to-day. The President expressed himself strongly in favor of the Code of Ethics of the American Medical Association, and hoped that the profession of the State would continue as united as they have been on this subject. Code or no code, how can a scientific physician consult with one with whose system he has nothing in common? We may use all agencies for the cure of disease, but bind ourselves to no narrow system. Politics and medicine do not blend well together, but on matters of sanitation the physician should use his influence—such as public health, drainage, quarantine, etc. The President also spoke of the need of protecting physicians in regard to testifying in court where professional confidence is involved. The address closed with remarks on the need of enlarged accommodations for the growing library.

THE REPORT OF THE TREASURER

was then read. Dr. Judson Gilman, who had for many years acted as Treasurer to the Faculty, had died during the past year, and the report was made by the Treasurer elected by the Executive Committee to fill his place, viz., Dr. W. F. A. Kemp. The report showed that notwithstanding the increased expenses this year, caused by the publication of the volume containing the *Medical Annals of Baltimore*, the financial condition of the Faculty was good and the indebtedness small—$1340.60 in all having been collected during the year.

DR. B. B. BROWNE, Chairman, read the

REPORT OF THE LIBRARY COMMITTEE.

After reviewing the work of the last ten years, it stated that since the last report, 673 volumes have been added by purchase, donation, and exchange.

THE COMMITTEE ON MEMOIRS,

DR. EUGENE F. CORDELL, Chairman, reported the death of two members of the Faculty since last year: Dr. Judson Gilman, aged 65, and Dr. E. Gover Cox, aged 63. DR. GILMAN was for more than thirty years a member of the Faculty, and has acted as its Treasurer since 1870. His wise and discreet financial management was much valued. He rendered efficient service during the epidemic of yellow fever in Norfolk, in 1855, and visited that city as a Commissioner of the Board of Health of Baltimore, to investigate the origin and nature of the disease. DR. E. GOVER COX removed to Baltimore in 1852, and continued to reside there until his last illness. He paid special attention to the treatment of diseases of women, in which he acquired great skill and success. He took an active interest in the working of various beneficial organizations, and was especially prominent in the Order of Odd Fellows.

DR. G. LANE TANEYHILL, Chairman, read the

REPORT OF THE PUBLICATION COMMITTEE.

The report showed that, in addition to the publication of the usual volume of *Transactions*, the committee had published, according to the direction of the Faculty, the *Medical Annals of Baltimore*, which had been prepared with great labor by Dr. John R. Quinan.

DR. J. E. MICHAEL, Chairman of the Section of Surgery, read

THE REPORT ON SURGERY.

He first took up the subject of *Antiseptic Surgery*. If the latter part of the nineteenth century will be celebrated in the future annals of surgery, it will be for the triumph of antiseptics and of the germ theory of wound diseases. Many of us can remember how leading surgeons used to laugh at the antiseptic plan introduced by Lister. Now it is not a question whether antiseptics shall or shall not be used, so much as *what* antiseptic. Even the opponents of the system, who believe in "cleanliness in surgery," act on the germ theory when they cleanse their apartments with chlorine gas, and boil the water they will use for irrigation, etc., before they use it, and take other precautions of the same kind. Their success is really an argument in favor of Listerism. This term should not be confined to a special formula used by Lister, for he is really the father of all antiseptic surgery. The fact that the best germicides known are also hurtful to the human organism, and the ambition of surgeons to be the introducers of new antiseptics has resulted in many experiments in this direction, and has added much to our knowledge. A perfectly certain, and yet safe, antiseptic is still wanting. Carbolic acid is dangerous. Thymol, salicylic acid, boracic acid, even iodoform and subnitrate of bismuth have been found not to be free from objection, and corrosive sublimate, although no ill results have yet been reported, is too violent a poison not to produce at some time dangerous symptoms in those who are specially open to the effects of this salt. How to use antiseptics, is a question that must largely be answered by each surgeon for himself. The costly apparatus used by Lister would be unsuitable for country practitioners; but it is not necessary, as Lister himself has shown. A good plan is to sponge or irrigate with carbolic or corrosive sublimate solution, and dress the wound with oakum or absorbent cotton and iodoform.

The report proceeded to consider *abdominal surgery*, and noted the great advances that had been made in this direction. Turning to *cancer of the breast*, Dr. Michael said that as the view that cancer began as a local disorder gained ground, operative procedures were more frequent. The enlargement of the axillary glands is not a contraindication for operating, but they should be removed as well as the cancerous growth in the breast. Even when the disease has advanced too far to hope for a radical cure, extirpation affords relief. He said that he has now two cases on hand, in one of which he has operated three times in four years, and in the other three times in three years. In the meantime, between the operations, the patients are comfortable and attend to their family duties, and so convinced are they of the advantage of removing the diseased tissues that they return of their own accord to the Hospital as soon as the disease has made itself manifest again.

He then referred to Lister's method of *wiring the fractured patella*, and expressed the opinion that while in old cases, in which the function of the limb was interferred with, this operation promised well for restoring the function, yet in recent cases the old plan succeeds, especially if the knee be kept straight for a sufficient

length of time. Bony union is rare, but restoration of function is common.

Digital examination of the bladder, as recommended by Sir Henry Thompson, was adverted to, and the reporter then went on to speak of the treatment of *strictures of the urethra*. Passing over, in a few words, the treatment of strictures of the pendulous portion, he proceeded to those of the bulbo-membranous and membranous portion. Electrolysis is highly praised, but has not yet been thoroughly proved. The treatment by perineal section, with or without a guide, in old and obstinate cases, especially where patients show that peculiar tendency to chills after manipulation, has much to recommend it, though it is often difficult and tedious. Dr. Michael considers it far safer than the internal operations. He reported a case on which he had operated without a guide in last January. The patient had severe chills after manipulation, and had become very weak and seemed on the verge of the grave. Now he is going about, constantly improving; the perineal wound is nearly healed. He passes a good stream of water, and uses a No. 16 E. steel sound.

The Chairman of the Section on Practice being absent, the reading of his report was postponed, and Dr. Robert W. Johnson read a supplementary report on

CRYPTORCHIDISM,

in which he entered very minutely into the history of the subject, and spoke of the effect this condition may have upon the mind of the unfortunate man—referring to the case of Sir Astley Cooper's apprentice, who was so depressed that he finally committed suicide. There are several varieties of perverted development and abnormal position of the testicle: 1. There may be supernumerary testicles, with which we have nothing to do. 2. We have the class of monorchids or persons having only one testicle in the scrotum, the other in the abdomen, inguinal canal or perineum, or thigh. One healthy testicle is sufficient for purposes of reproduction. 3. More rare are the cryptorchids: no testicle in scrotum on either side. These are further divided (*a*) into those who are actually devoid of testicles, or anorchids; (*b*) those whose testicles are both in the abdominal cavity or inguinal canals; and (*c*) those who are a mixture of the other classes, *i. e.*, have one testicle in the abdomen and one in the canal. Marshall states that monorchids occur once in eight hundred examinations, and cryptorchids once in twelve thousand. The individuals thus affected are apt to be effeminate, with shrill voice, beardless, or having only down upon their faces: in short, approaching hermaphroditism. This is not always the case; there may be no apparent difference between the person so affected and an ordinary man. The most singular thing of all is that there have been cases in which the wives have never suspected anything to be wrong; in fact, some of this class are extremely lascivious.

Dr. Johnson then proceeded to discuss the causes of this abnormality and the effect on the retained testicle, and concluded by saying that, as a general rule, the testicle was apt to suffer less if retained in the abdomen than if in the inguinal canal. In the latter position it is much more exposed to pressure from various causes, often from an ill-fitting truss, and it appears that malignant disease often attacks the testicle in this position. Subjectively, the influence is greater if the testicles are in the abdomen, as it affords comfort and reassurance to the man when he finds his scrotum empty to feel the missing testicle in the groin. Are cryptorchids sterile? We must distinguish between sterility and impotence; the former implies inability to beget offspring, the latter inability to have sexual intercourse. They are certainly not impotent, but are apt to be sterile, though not necessarily so. The testicle in its abnormal seat can be affected with all the ills that affect the testicle in its normal seat—orchitis, etc.

Dr. Johnson had prepared elaborate tables, of which the following is a summary:

Total number of cases,	89
Cases over 14 years of age,	66
No testicle found post-mortem,	9
Both testicles *may* have been retained in abdomen,	Uncertain.
Both testicles in inguinal canal,	18
Only one testicle in canal,	8
Seminal fluid examined microscopically,	15
Spermatozoa were found in semen (one very dubious),	3
Number having children,	10
In one case heredity was remarked where a monorchid begat a cryptorchid child.	

Dr. Johnson then related a case of his own, which he brought before the Faculty. A young man thirty-three years of age, well developed, hairy, muscular, with deep voice and full chest. He was a perfect Lothario, and quite gloried in his amours; was once in trouble on the charge of bastardy from which he escaped on the payment of a large sum of money. He claims to have had children. His mother noticed that his scrotum was empty in infancy. He is a sailor, and one day, while pulling a rope, felt something give way on his right side, which proved to be the beginning of a hernia, for which he sought treatment. The scrotum was found to be quite empty on both sides, excepting a small part of the bowel that could be felt protruding from the canal. On the first examination Dr. Johnson was able to feel the testicles presenting, but had not been able to feel them since. He examined the seminal fluid, found it lighter colored and more transparent than normal, lacking the usual smell and devoid of spermatozoa, when examined microscopically. He had repeated the examination on several occasions, and always with the same result.

As regards treatment, he said that if the testicle is retained in the abdomen, nothing can be done except to wait for its descent, which may be hoped for up to the end of the first year. If it is in the canal, moderate and gentle traction is beneficial. The traction should be frequently repeated, rather than for a long time on any one occasion. If traction is of no avail, return it into the abdominal cavity. If this cannot be done, protect it with a horse-shoe pad, and relieve the strain on the gland with an abdominal support. Keep the patient in ignorance, if possible, of his sterility.

The Chairman of the Section on Obstetrics and Gynecology being absent, his report was postponed to a future meeting, and Dr. W. A. B. Sellman read, as a supplementary report, a paper on

THE EFFICACY OF IODOFORM IN PREVENTING UTERINE COLIC AND PELVIC INFLAMMATION FOLLOWING THE INTRAUTERINE APPLICATION OF NITRATE OF SILVER.

The paper was a practical one, and gave in detail Dr. Sellman's experience with these agents. He began by saying that, in the majority of cases of endometritis, applications of nitrate of silver (gr. lxxx ad f℥j) had been the most useful agent he had used. Perfect cure or great relief followed its repeated use, and he had never seen stricture or closure of the uterine canal follow. But a serious objection to it is that not unfrequently his patients would suffer severe attacks of uterine colic either immediately after the application or within an hour, and he had seen pelvic peritonitis and ovaritis brought on by it. He then recounted a case of this kind. To relieve the colic, which was of common occurrence, he tried belladonna, opium, and hyoscyamus, without effect. Knowing the anæsthetic power of iodoform, he tried that, and has never since had any after-trouble from the application of nitrate of silver. As to the cause of the uterine colic, he said that in congestive and inflammatory conditions of the uterus there exists, as a rule, a state of hyperæsthesia, and a nervous condition of the whole organism. The application causes the cervical canal to contract, and prevents the excess of fluid from discharging into the vagina. He never had a case of uterine colic with dilated canal. Pelvic inflammation following the applications he thought due to the excess of fluid being forced into a patent Fallopian tube. He never had a fatal case, but they caused much solicitude. His method is to make the application of the nitrate of silver solution on a cotton-wrapped applicator, immediately following it with powdered iodoform applied in the same manner. Sometimes the cervical canal contracts so suddenly and violently as to prevent the applicator being passed the second time. Under such circumstances he inserts a suppository or uterine bougie medicated or charged with iodoform. He covers the cervix thoroughly with iodoform, and sometimes saturates a pledget of cotton with iodoform and vaseline, leaving a string attached for the patient to remove it the next morning. These procedures have prevented all unpleasant after-effects.

WEDNESDAY, APRIL 13, SECOND DAY.

After the routine business had been transacted, DR. A. B. ARNOLD, Chairman of the Section on Practice, read a report entitled

REFLECTIONS ON PRACTICE,

in which he passed in review the changes in the theory and practice of therapeutics which have taken place during the last half century. There have been two schools of thought in medicine, the one holding that rational therapeutics must strictly conform to scientific principles, the other that experience is the only safe guide. After passing in rapid review the work of those who prepared the way for the most brilliant epoch of medicine, the report spoke of Louis and his numerical system, which he hoped would place therapeutics upon a solid basis. This method is an empiricism pure and simple. The choice of remedies is to be decided by statistics. Admitting all that can be said in its favor, the individual peculiarities of each patient, and the varying conditions of each case, modify the indications for treatment too much to allow the entire acceptance of this theory; still, this method is the most reliable means of discovering the relative value of a remedy in a well-defined symptom — as the use of bromides in convulsive affections.

Both the French and Vienna schools have been singularly sterile in the direction of therapeutics. Rokitanski (1846) declaimed against the pretensions of founding a system of therapeutics on any other ground than pathological doctrines, and Skoda avowed the same views even more decidedly. These leaders had a great effect in unsettling the minds of the younger men of the profession in Germany in regard to the trustworthiness of the current methods of treatment. The promise of rational therapeutics, which should be the outcome of a thorough knowledge of pathological anatomy and chemistry, has not been fulfilled, and at present it appears to be chimerical. The teachings of this school, however, have had the effect of causing the practice of indiscriminate venesection to fall into disgrace. The radical fault in the French and Vienna schools has been to consider disease to be a physiologico-chemical entity against which remedies are to be exclusively directed. In fact, however, we have to treat not diseases merely, but diseased individuals with all their personal peculiarities.

The characteristic of English practice is to trust more to experience than to theory, and though of the two this may be safer, glaring fallacies have passed current on the authority of experience, *e. g.*, venesection. The difficulty in this direction is that the tendency of certain diseases toward recovery is overlooked, and must always form a difficulty in accurately estimating the curative powers of a remedy.

Modern standard works consider therapeutics a branch of physiological science, and the most certain advances in therapeutical knowledge are looked for from the physiological method. The paper closed with the consideration of the modern treatment of fevers as a good test and example of what has been gained in therapeutics.

WILLIAM PEPPER, M.D., of the University of Pennsylvania, then delivered the *Annual Address*, taking for his subject

SOME PRACTICAL REMARKS ON DIETETICS IN DISEASE.

Remembering the thoughtful little work, *Health, and How To Promote It*, recently published by the President, Professor McSherry, Dr. Pepper said he was led to hope that some practical remarks upon the subject of *dietetics* might not be without interest. On reviewing what he had prepared, however, he felt that the title selected was somewhat inappropriate, as he had dwelt more upon the relations of dietetic errors to the production of disease than upon the actual value of diet during the disease. Although the subject has not always claimed the attention which it merits, yet, on the whole, we must acknowledge that amidst the currents and counter-currents of medical opinion during the past decade there has been a constantly growing appreciation of the value of dietetics; indeed, we may safely assert that it is becoming recognized that in very many conditions of impaired health and actual disease successful treatment depends chiefly or exclusively upon proper diet and

regimen. He believed that from a proper study of the wide range and varied character of the morbid symptoms resulting from the gift of food abused, and the wonderful remedial effects of special forms of diet, it would appear that it is in this line more than in any other that the greatest triumphs of therapeutics are to be won in the near future. In estimating the influence of the factors of our physical life upon the development of the individual or race, too much importance has been attached to climate and far too little to diet and personal hygiene. For the establishment of the laws of dietetics and hygiene we are concerned only with the average man, not with those exceptional individuals in every community who display the highest physical and intellectual health whilst pursuing courses of life admissibly injurious.

In India and Australia we have seen the experiment of subjecting large numbers of Anglo-Saxons to climatic conditions diametrically opposite to those familiar to that race, and the result seems to be that with suitable diet and regimen its characteristic health and energy will not be impaired. In this country a more complicated experiment is being tried. A nation recruited from all quarters of the globe, a vast territory—wide varieties of soil and climate—the gift of freedom, personal, political, and pecuniary, to be borne by millions heretofore comparative strangers to these blessings. Can we wonder that during the fierce contest to be waged with strange and untried climatic, industrial, and social conditions many curious effects, physical as well as social, have been developed? The so-called typical American, with his pale, sallow face and tall, slender figure, full of the irritable restlessness bred of nervous dyspepsia, certainly differs widely from his English, Irish, or German ancestors, and the interesting question arises whether his physical peculiarities are inseparably dependent upon our climatic conditions, or upon other and transient influences. Prof. Pepper stated his deliberate conclusion that it is to the latter conditions almost exclusively that we are to attribute these results. He indicated the abuses of various articles of food and drink which are the undoubted cause of this state of things, and reiterated his opinion that this was the cause of most of the physical peculiarities commonly assigned to the American climate. He believed that with due regard to the conditions, there is no more favorable climate upon earth than our own. He deprecated, too, the excessive share which has been attributed to overwork in the production of many forms of nervous exhaustion. In his own experience, cases really induced by this cause were rare, and in the vast majority an amount of work entirely consistent with long-maintained health is rendered destructive by reckless disregard of the laws of health. It is true that the conditions of our higher forms of work in America are more difficult than in older and better organized communities, but a study of the habits of professional and business men in other countries has convinced him that the important question is really "How to live while working."

If it were possible for all to appreciate correctly their physical condition and capacity at the outset, so as to adapt their method of work to their physical requirements, we should see quite as much or more work done with infinitely fewer instances of (physical) disaster. The velocity and range of a projectile vary directly as the initial power, and inversely as the mass to be moved. In its application to the human body this is a most pregnant truth. To adjust the actual weight of the body to the physical powers of the individual, and to render these innumerable minute processes as easy and complete as possible is the aim of dietetics and regimen and the common-sense policy of every man who aspires to work to the best advantage. The enduring capacity of a man is measured by his weakest organ only. We are able by intelligence and self-restraint to spare this weak spot, and enable ourselves to tax our stronger parts to their full extent. The weak spot is commonly at some point in the assimilative process, but by no means *usually* in the stomach or intestines, or, at least, not manifested there most clearly. Whilst the original cause of the trouble may lie there, it very often shows itself in the subsequent changes, whether interstitial or metabolic. For instance, the absence of well-marked attacks of gout long blinded our eyes to the fact that the gouty diathesis is widely prevalent in this country. It is difficult to define gout, but it seems necessary to include under this head all that large series of cases with or without marked gastro-intestinal disturbances, in which there is obstruction to and deficiency of the ulterior assimilative changes before the food reaches its final fully digested forms.

He wished to call special attention to the great frequency with which, out of the presence of one or more of these causes, there is gradually evolved the complicated condition to which it is becoming the habit to apply the name of neurasthenia, and which is too often regarded as the result of pure nervous exhaustion from overwork, and therefore requiring simply tonics, rest, and high feeding. Such cases after they have been brought up to a certain point, require a protracted course of well-ordered regimen, dietetics, and exercise. Of course, one special method of treatment can be applicable only to one special group of cases, but it is the work of the skilled physician to discover to what group any special case belongs, and to select the method of medication best adapted to it. He alluded to the special methods employed by empirics, the system of Pressnitz, and those well-known methods employed at popular spas, the waters of which are totally inert. Although unscientifically employed, these methods do succeed in certain cases which have baffled the ordinary medical resources, and prove that remarkable results may be obtained by a systematic and oftimes extreme use of the simple agents—rest, exercise, food, drink, and bathing.

He spoke of the remarkable treatment called Schroth's Cure, now practised at Lindewiese, in Germany, which consists in an artificially induced attack of continued fever, developed by long-continued abstinence from water (thirty-six to ninety-six hours), and great restriction in diet and violent exercise, alternating with free stimulation. While undoubtedly hurtful in many cases, even this has been known to effect remarkable cures in constitutional syphilis, rheumatism, etc.

He remarked on the revival of the hot water mania, and said that the truth about it is that there are not a few cases of dyspepsia and lithæmia, of certain types of rheumatism, and gastro-intestinal catarrh, in which this remedy, combined with other simple hygienic measures, is the best cure. While hot water, taken as its advocates advise, is capable of doing harm, it will do good

in so far as it discourages the use of tea and coffee. We are advancing towards a time when for each carefully diagnosed group of cases there will be a scientifically adapted diet.

In illustration of these views, Prof. Pepper proceeded to give in detail several cases of great interest, in which patients suffering from severe disorders were greatly benefited, chiefly by attention to dietetics. One of his cases was a woman of 65, with all the symptoms of advanced fatty degeneration of the heart. Noticing that she had steadily increased in weight during her sickness, and was very fleshy, he put her on a reduced diet, and with proper medication effected entire relief of the symptoms in about nine months, during which time her weight decreased from one hundred and sixty-five to one hundred and forty pounds.

Systematic reduction is to be instituted only when symptoms clearly indicate it. When reasonable reduction of diet fails to produce a marked diminution in the weight, the patient has probably not too much weight. When body weight falls rapidly, even if symptoms subside commensurately, check it early to avoid debility. Care must be taken in reducing weight, lest a marked reduction might favor the development of some latent morbid tendency, such as tuberculosis, cancer, or scrofula. A reaction has commenced against the indiscriminate stimulation in disease advocated by Todd and his followers. In acute disease, to push stimulants and concentrated food beyond the power of the patient to assimilate, puts an additional burden upon his already weakened system. In chronic diseases, restoration of power, relief of symptoms, etc., can only be accomplished by thoroughly adjusting the diet and hygiene to the altered conditions of the state of nutrition, and then as far as possible directing our remedies to the actual indications.

DR. P. C. WILLIAMS, Chairman of the Section on Obstetrics and Gynecology, then read his report, entitled

THE USE OF ERGOT IN OBSTETRICS.

He began by considering the modern criticism upon the use of ergot in obstetrics, seeking to test this criticism by clinical facts that had come under his personal observation. Of all the fluctuations in the views of medical men, none has been more marked than in regard to the use of this drug. Many prominent obstetricians denounce its use under all circumstances in obstetrical practice. Dr. Engelmann, of St. Louis, considers it entirely unnecessary in midwifery, on the ground that grave accidents and serious injuries both to mother and child result from its use (rupture of uterus, lacerations, etc.). He would limit its administration to the non-pregnant womb. With these views Dr. Albert H. Smith entirely agreed (Amer. Gynec. Soc., Sept. 1883). Dr. Engelmann has just published in THE MEDICAL NEWS an account of two cases of rupture of the uterus, ascribing both cases to the use of ergot.

The literature of the subject presents a terrible picture of injury and death from the employment of this drug, and it requires some courage to place one's own personal experience against such an array of authority; but one can only speak of what one has seen and heard. Of course, all remedies powerful for good are powerful for evil, and the disasters referred to are generally from the improper use of the medicine. For example, take Dr. Engelmann's second case (the first case not being described with sufficient care). The lady had been under the care of a midwife, and had been four days in labor *with shoulder presentation*, when Dr. Engelmann was called. The rupture had already occurred. On the third day a physician, who had been called in, found the os dilated, but the parts rigid and dry; an arm in the vagina. He gave ergot in drachm doses, which he repeated thrice in the half hour. He endeavored to turn, but failed; another physician tried and failed. The patient was left with orders to continue the ergot. On the morning of the fourth day Dr. Engelmann was sent for, and found the condition the same as described, and the uterus ruptured. Child was removed by disarticulation, etc., and the mother died in two hours. Of course, ergot produced rupture in such a case. In cases also in which the position is normal, but the pelvis is deformed and the pains have ceased from exhaustion of the mother, or in which there is no deformity or malposition, but the membranes are ruptured, the parts hot and dry, and the progress of the case is slow, the employment of ergot is improper and disaster must result from it.

But is ergot, therefore, always equally destructive under all circumstances? According to Stillé's statistics of Prof. Busch's cases (of Berlin), in which ergot was given for weak labor pains, 1 child in 10 died; 1 in 8 of Chatto's cases died. Drs. McClintock and Hardy in 30 difficult labors used ergot in second stage and lost 20 children. Dr. West (in defence of ergot) admitted 1 death in 8 cases. These statistics (showing in all 1 death in 7 cases), Stillé considers conclusive evidence of the destructive effect of ergot on the child when used before the close of labor.

Dr. Williams considered that, appalling as these statements are, the danger is not inherent in the drug, but depends largely upon the conditions under which it is employed. He then gave his own statistics. In 1874 he had read a paper on the use of ergot hypodermically in post-partum hemorrhage. The success obtained in these induced him to use ergot thereafter in most cases to prevent hemorrhage, and the result vindicated the wisdom of the plan. Since that time he *has "never had a case of post-partum hemorrhage to deal with."* Since 1875 he has employed ergot in 210 cases, in 70 of these forceps were used, and in nearly all chloroform was administered. In these cases 215 children were born, with the following result:

1875,	41 cases.	No mother died and no child.	
1876,	22 "	No " " " " "	
1877,	15 "	3 mothers " " one "	(twins).
1878,	18 "	No mother " " " " "	"
1879,	21 "	No " " " no "	
1880,	25 "	No " " " one "	
1881,	21 "	One " " " " "	
1882,	22 "	One " " " two children.	
1883,	15 "	No " " " one child.	
1884,	10 "	No " " " no "	

Of the mothers (one death in forty-two), three died of puerperal convulsions, one from septicæmia, and one from exhaustion before it was possible to deliver. Of the children (one death in twenty-seven), two were twins and died from inherent debility; one was stillborn, the mother dying of uræmic coma, and being unconscious

when the doctor reached her; one, a foot-presentation, dead before seen; four were of immense size, and died from delay in effecting delivery. One of these died from an enormous hemorrhage caused by the mother leaping into bed on seeing the doctor's carriage stop at the door, the suddenness of the movement causing detachment of the placenta. The remaining three were so large and out of proportion to the pelvic capacity that death seemed inevitable. The ergot, it is fair to conclude, had nothing to do with any of these deaths. However this may be, these statistics stand in striking contrast to Prof. Stillé's, and show that the danger is not inherent in the drug, but is dependent upon the conditions under which it is given. In Dr. Engelmann's second case, the circumstances under which it was given made disaster inevitable.

Ergot should never be given in a *shoulder presentation*, or, on general principiples, in any malposition of the child, unless followed immediately by chloroform and other active intervention to terminate labor. It should never be given in the first stage of labor unless the os and vagina are fully dilated or easily dilatable—never in any stage of labor where the head is too large for the pelvis, unless forceps be used immedjately. It may be given in the first stage where the above-mentioned restrictions are not present. The same rules apply in the second stage (the vagina and perineum must be distensible and elastic). With the above restrictions it may be given in any stage of labor, when pains are feeble. In *every* case in which ergot has been given and the head ceases to descend, or recedes between the intervals of pain, forceps must be applied at once. Delay, under these circumstances, is a fruitful source of danger. It was failure to observe this rule that led to the frightful mortality in Drs. McClintock and Hardy's cases, tn which ergot was given and the labor left to itself without instrumental assistance.

It is Dr. Williams's custom to relieve the pain of childbirth in almost every case by the administration of chloroform, and as this drug is thought to weaken the pains and favor hemorrhage, he thinks it wise to be on the safe side, and, therefore, administers ergot, before giving chloroform, in every case in which it is not contraindicated by some of the conditions above mentioned. He also gives ergot to maintain uterine contraction after labor to guard against post-partum hemorrhage and against septic absorption. Since he adopted this rule (1875), he has had *no case of post-partum hemorrhage, and but one case of septicæmia.*

Dr. Opie, in opening the discussion, spoke of the difficulty of discovering by touch or other exploration the relation between the head of the child and the capacity of the straits. Should delay in relief by forceps occur after the administration of ergot, danger will ensue. The action of ergot is counteracted by full anæsthesia, so that we run the risk of hemorrhage before it acts when we give chloroform. Ergot does not act for about forty minutes.

Dr. Wilson said that he never gives ergot before delivery, except when certain that the child will be delivered in a few moments. It is impossible to tell whether delivery is possible; there may be unexpected difficulty. After labor, he uses it to prevent septicæmia; but, in his hands, it is not to be depended on for post-partum hemorrhage.

Dr. John Morris agreed fully with Dr. Williams. In two thousand obstetric cases he had only seen two deaths that could be traced to the use of ergot.

Dr. Branham drew attention to the fact that ergot causes danger to the child because it produces, not the normal contractions of the uterus, but tonic contractions. It is this faculty that makes it useful in the prevention of septicæmia and post-partum hemorrhage.

Dr. Williams, in reply, said that he had guarded the point of the danger of ergot in cases in which there was a disproportion betwen the head of the child and the size of the pelvis. In regard to the unexpected difficulties that might cause dangerous delay in the delivery of the child by the forceps after ergot had been administered, he would refer to his own cases: out of seventy deliveries by forceps, there were only three cases in which such delay could have caused death. In one case, only Cæsarean section could have saved the child. It was large, and the sutures of the cranium were firmly united. An examination of the causes of death in the remaining two instances convinced him that ergot had not caused it. By administering ergot before delivery, time is given for its full physiological effect to take place by the time the child is expelled. He did not think the entire absence of post-partum hemorrhage in his cases since he adopted his present practice (in 1874–75) could have been accidental.

NEWS ITEMS.

WASHINGTON.

(*From our Special Correspondent.*)

The American Medical Association will hold its thirty-fifth annual meeting in Washington, beginning on Tuesday, May 6th. The Association will be called to order in the Congregational Church, corner of Tenth and G Streets, at 10.30 A.M., by Dr. A. Y. P. Garnett, Chairman of the Committee of Arrangements, who, after the induction into office of the President-elect, Dr. Austin Flint, will deliver the Address of Welcome.

The Reports of the Committee of Arrangements, and of the Committee on Credentials will be presented, and then Dr. Austin Flint will deliver the Annual Address, after which the reports of special committees and new and miscellaneous business will be in order.

SECTIONS.

The Sections will meet in the afternoon at 2.30 o'clock, and the following papers will be read:

Section on Practice of Medicine (Main Hall, Room A, Congregational Church). A Contribution to the Clinical Study of Epilepsy, by Prof. William Pepper, of Philadelphia. Simulation of Pathognomonic Signs and Symptoms, by Edward G. Janeway, M.D., of New York. Dermatitis Herpetiformis, by Louis A. Duhring, M.D., of Philadelphia. The Etiology of Pericarditis, by James T. Whittaker, M.D., of Cincinnati. Importance of Uniformity in the Pharmacopœia, by D. W. Prentiss, M.D., of Washington. The Germ Theory of Disease, by H. O. Marcy, M.D., of Boston. The Production of Poisons by Microörganisms, by G. V. Black, M.D., of Illinois. The New Officinal Chlorate, by Traill Green, M.D., of Pennsylvania. Irritation of the Capsule of Glisson, by R. Harvey Reed, M.D.

Section on Obstetrics and Diseases of Women (Room B, Congregational Church). Desperate Surgery among Women; the Proper Field for It; Who Should and Who Should Not Attempt It; by R. S. Sutton, M.D., of Pennsylvania. Mechanical Methods and Appliances in Uterine Dislocations and Distortions, by H. F. Campbell, M.D., of Georgia. The Treatment Proper to Cancer of the Uterus, by W. M. Polk, M.D., of New York. Surgical Operation for Cancer of the Uterus, by W. H. Byford, M.D., of Illinois. The Effects of Trachelorrhaphy, by J. Taber Johnson, M.D., of Washington, D. C. The Rectal Diseases of Women, by Edward M. Jenks, M.D., of Illinois.

Section on Surgery and Anatomy (National Rifles Armory, 2d floor, Room C, G St. between 9th and 10th). Treatment of Compound Fractures, by Frederick S. Dennis, M.D., of New York. On Railroad Injuries of the Extremities of the Human Body, with Observations on the Site of Amputation and Subsequent Treatment of the Stump, by T. R. Varick, M.D., of New Jersey. Tracheotomy in Diphtheria, by Charles A. Leale, M.D., of New York. Amputation at the Hip-joint, with a Review of the Various Methods of Controlling Hemorrhage, by C. A. Wheeler, M.D., of Minnesota. The Excision of Nasal and Naso-pharyngeal Polypi by a New and Easy Method, by Joseph Ransohoff, M.D., of Ohio. On Twelve Months' Surgical Experience at the London Temperance Hospital, by A. Pearce Gould, M.D., F.R.C.S., of London.

Section on State Medicine (Room D, cor. 6th and F Sts.). Sensationalism and Dogmatism in Sanitary Matters, by H. Leffmann, M.D., of Pa. Jewish Hygiene and Diet, from the Talmud and other Jewish Writings, heretofore Untranslated, by C. H. VonKlein, M.D., of Ohio.

Section on Ophthalmology, Otology, and Laryngology (Room S, Congregational Church). Neoplasms of the Lachrymal Glands, by J. N. Mackenzie, M.D., of Baltimore. A Modified Prisoptometer, by T. E. Murrell, M.D., of Arkansas. A Case of Sympathetic Neuroretinitis, by Samuel D. Risley, M.D., of Pa. Diagnosis in Ophthalmology, by E. Williams, M.D., of Ohio. The Use of the Cresson Water in the Treatment of Catarrhal Affections of the Mucous Membranes of the Upper Air-passages, by Carl Seiler, M.D., of Pa.

Section on Diseases of Children (Room F, Congregational Church). The Significance of Bloody Discharges from the Bowels in Young Children, by F. Woodbury, M.D., of Pa. Septic Jaundice of Children in Parturition, by M. P. Hatfield, M.D., of Ill. Congenital Encephalocele, by J. H. Duncan, M.D., of Mo. Diphtheria, Based upon Analysis of One Hundred and Twenty Cases with a Mortality of Seven, by J. W. Brown, M.D., of New York.

Section on Oral and Dental Surgery (cor. 6th and F Sts.). The Removal of Tumors from the Upper Jaw, by Reuben A. Vance, M.D., of Ohio. Importance of, and Treatment for Assuring Healthy Dentine Over Endangered Pulps, by Jacob L. Williams, M.D., of Mass.

WEDNESDAY, MAY 7TH. GENERAL SESSION—10 A.M.

Announcement of Nominating Committee.

Report of the Committee on Securing more Competent Medical and Sanitary Service on Board Trans-oceanic Passenger Vessels, by A. N. Bell, M.D., Chairman.

11 A.M.—Address of the Chairman of the Section of Practice of Medicine, Dr. J. V. Shoemaker, of Philadelphia.

12 M.—Address of the Chairman of the Section of Obstetrics and Diseases of Women, Dr. T. A. Reamy, of Cincinnati.

New and Miscellaneous Business.

SECTIONS.

Section on Practice of Medicine. Clinical Study of the Heart Sounds, by Austin Flint, M.D., of New York. Primary Cancer of the Brain, by Roberts Bartholow, M.D., of Philadelphia The Pathology of Myocarditis, by Wm. H. Welch, M.D., of New York. The Dietetic Treatment of Diabetes Mellitus, by Austin Flint, Jr., M.D., of New York. Phthisis, Its Successful Treatment, by J. P. Miller, M.D. The Milk Treatment of Disease, by James Tyson, M.D., of Philadelphia. Irregular Apoplectic Attacks from Other Causes than Hemorrhage and Embolism, by Gaspar Griswold, M.D., of New York. Occult Cause of Disease, by W. L. Schenck, M.D. The Advantages of Massage in Rheumatic Gout, by Douglass Graham, M.D., of Massachusetts.

Section of Obstetrics: Puerperal Septicæmia, by Theophilus Parvin, M.D., of Philadelphia. Subject to be Announced, by George J. Engelmann, M.D., of St. Louis. A Contribution to the Relation of Ovulation and Menstruation, by A. Reeves Jackson, M.D., of Illinois. The Management of Protracted Labor, by Wm. H. Taylor, M.D., of Ohio. The Use of Hot Water in the Treatment of Cystitis in the Female, by S. C. Dudley, M.D., of Illinois. Does the Use of Ether in Parturition Increase the Danger to the Child, by Ellwood Wilson, M.D., of Phila. The Use of Chloroform in Labor, by J. Herbert Claiborne, M.D., of Virginia.

Section on Surgery and Anatomy: Tuberculosis of Bones and Joints, and its Treatment by Ignipuncture, by Roswell Park, M.D., of Buffalo. Is Carcinoma Mammæ Curable by Operative Procedures? by Charles B. Nancrede, M.D., of Philadelphia. An Earthy Calculus in the Substance of the Liver, by Wm. A. Byrd, M.D., of Illinois. On Bronchial Cysts of the Neck, by N. Senn, M.D., of Wisconsin. Intestinal Paralysis Consequent upon Acute Pressure, by P. S. Conner, M.D., of Cincinnati. The Treatment of Hydrophobia, Historically and Practically Considered, by C. W. Dulles, M.D., of Philadelphia.

Section on Ophthalmology, Otology, and Laryngology: Influence of Climate on the Treatment of Chronic Catarrh of the Middle Ear, by J. F. Fulton, M.D., of Minnesota. Epistaxis, by D. N. Rankin, M.D., of Pennsylvania. A Combined Visual and Astigmatic Test (Snellen's Type), Based on the Confusion Letters of the Astigmatic, by W. S. Little, M.D., of Philadelphia. Report on the Diseases of the Ear in Locomotive and other Engineers, Firemen, and Conductors, which may Endanger the Lives of the Travelling Public, by Laurence Turnbull, M.D., of Philadelphia. A Preliminary Report upon the Causes of Blindness, by C. M. Hobley, M.D., of Iowa.

Section on Diseases of Children: Remarks on the Feeding of School Children, by Louis Atlee, M.D., of Pennsylvania. Enlarged Tonsils, and How They Should be Treated, by Dudley S. Reynolds, M.D., of Kentucky. A Unique Case of Hydrencephalocele, by George W. Rachel, M.D., of New York.

Section on Oral and Dental Surgery: Sponge-grafting, by E. C. Briggs, M.D., of Mass. The Removal of Stains from the Teeth Caused by the Administration of Medicinal Agents, and the Bleaching of Pulpless Teeth, by A. N. Harlan, M.D., of Illinois.

THURSDAY, MAY 8TH. GENERAL SESSION.

Report of Committee on Nominations.

Report of Standing Committee on Meteorological Conditions and their Relations to the Prevalence of Disease. Also concerning the subject of Collective Investigation of Disease in coöperation with the Committee of the British Medical Association. By N. S. Davis, M.D., Ill., Chairman.

11 A.M.—Address of Chairman of the Section of Surgery and Anatomy, Dr. C. F. Parkes, of Chicago.

12 M.—Address of the Chairman of the Section of State Medicine, Dr. J. Roberts, of Nashville.

Report of the Treasurer.

Report of the Librarian.

Report of the Committee of Publication.

Miscellaneous Business.

SECTIONS.

Section on Practice of Medicine: Tuberculosis, by Henry F. Formad, M.D., of Phila. Retardation of the Pulse in Mitral Insufficiency, by A. T. Keyt, M.D., of Ohio. Specific Treatment of Diphtheria and Croup, by G. A. Linn, M.D. Muscular Hypertrophy of the Stomach, by Alexander Marcy, Jr., M.D. Etiology of Enteric Fever, by S. K. Crawford, M.D. Typhoid Fever, by S. K. Jackson, M.D. The Diagnosis of Tumors of the Anterior Mediastinum, by James C. Wilson, M.D., of Philadelphia. New Theory and Instrument of Diagnosis, by S. G. Ayres, M.D.

Section on Obstetrics: On the Management and Rectification of the Child's Head in Difficult Cases of Occipito-posterior Presentations, by I. E. Taylor, M.D., of New York. A Thousand Cases of Labor in Private Practice, and the Deductions to be Made from the Same, by W. M. Findley, M.D., of Pennsylvania. Causes and Prevention of Lacerations of the Female Sexual Organs, by S. D. Gross, M.D., of Phila. Malformation of the Female Sexual Organs Resulting from Arrest of Development, by B. B. Browne, M.D., of Maryland. Sudden Death in Labor and Childbed, by W. T. Lusk, M.D., of New York. Subject to be announced, by Robert Battey, M.D., of Ga.

Section on Surgery: A Case of Chronic Serous Synovitis of Knee, with Enormous Communicating Popliteal Bursa Extending to Tendo-Achillis, by T. F. Pruitt, M.D., of Missouri. Subject to be announced, by A. McLane Tiffany, M.D., of Maryland. Subject to be announced, by J. E. Owens, M.D., of Ill. Urethrotomia Lithotriptica, by M. Schuppert, M.D., of Louisiana. Treatment of an Obstinate Case of Club-foot, by E. H. Bradford, M.D., of Mass. Transfusion, by J. C. Hutchison, M.D., of Brooklyn. Entrance of Air into the Veins as a Secondary Cause of Death, by George S. Porter, M.D., of Conn.

Section on Ophthalmology, Otology, and Laryngology: Naso-pharyngeal Fibromata, by E. Fletcher Ingals, M.D., of Illinois. Observations on the Effects of Chronic Poisoning on the Nose and Adjacent Cavities, by J. N. Mackenzie, M.D., of Baltimore. Some of the Physical Causes of Asthma, by E. Cutter, M.D. A Simple Device for the Destruction and Removal of Tumors in the Naso-pharynx, by J. R. Upler, M.D., of Maryland.

Section on Diseases of Children: Bright's Disease of Malarial Origin, by I. E. Atkinson, M.D., of Maryland. Clinical Observations in Rötheln, by William A. Edwards, M.D., of Pennsylvania. Therapeutics of Infancy, by William Perry, M.D., of New Jersey. Practical Suggestions on the Treatment of the Malignant Forms of Scarlet Fever, by Bedford Brown, M.D., of Virginia.

Section on Oral and Dental Surgery: Overdraft of Nervous or Vital Power, as Affecting General and Special Health, by Jacob L. Williams, M.D., of Massachusetts. Periodic Hemorrhage from the Gums, Associated with Pyorrhœa Alveolans, the Result of Amenorrhœa, by W. Wallport, M.D., of Illinois.

FRIDAY, MAY 9TH. GENERAL SESSION.

Concluding Report of Committee on Nominations.

Address of the Chairman of the Section on Ophthalmology, Otology, and Laryngology, Dr. J. F. Chisolm, of Baltimore.

Address of the Chairman of the Section on Diseases of Children, Dr. Wm. Lee, of Baltimore.

Miscellaneous Business. Adjournment.

Entertainments.—The evenings will be occupied by a reception by the President of the United States, a reception by the medical profession of Washington, and several card receptions at private residences.

MEDICAL MATTERS IN CONGRESS. BUREAU OF LABOR AND STATISTICS.—The bill to establish and maintain a "Bureau of Labor and Statistics," which passed the House on the 21st inst. after considerable discussion by a vote of 183 ayes to 19 nays, provides for obtaining "the number and ages of children, nature of their occupation, the effect of different kinds of labor on their growth, development and health; the sanitary, educational, social and moral condition of laborers; the average duration of life; accidents incident to employment; insanity; epidemics; factory, mill, mine, and dwelling inspections; and the condition of tenement houses for operatives and the rental thereof."

ADULTERATION OF FOOD AND DRUGS.—A resolution, introduced on the 21st inst. by Mr. Beach, of New York, Chairman of the Public Health Committee of the House, authorizing the Committee to "inquire into the extent and character of the Adulteration of Food and Drugs imported into the United States, or exported therefrom," brought on an animated discussion between the chairman and Mr. Mills, of Texas. The resolution was finally defeated.

THE MEDICAL AND SURGICAL HISTORY OF THE WAR.—A joint resolution introduced by Mr. Scales, of North Carolina, on the the 21st inst. was agreed to, authorizing the Public Printer to print such number of copies of the *Medical and Surgical History of the Rebellion* and the *Rebellion Record* as he may receive orders for, accompanied by the cost price of the publication and ten per cent. additional, when such orders are sufficient to justify the expense of putting the plates to press. The tenth census and compendium were also included in the above resolution.

THE EMPLOYMENT OF DIFFERENT SCHOOLS OF MEDICINE IN THE GOVERNMENT SERVICE.—The homœopaths flooded the Senate on the 21st inst. with petitions and memorials praying the passage of Senate bill 1223, re-

quiring the Employment of Different Schools of Medicine in the Government Service.

Mr. McPherson, of New Jersey, explained the petition presented by him to mean that all grades of physicians and all classes, as allopathic, homœopathic, etc., should be made equal before the law in the Government Service of the United States. Petitions to the above effect were presented by Mr. Cameron of Wisconsin, Mr. Hawley, of Connecticut (whose petition was headed by Ex-Governor Wm. T. Minor, and signed by 117 others), by Mr. Cullom, of Illinois, who presented sundry petitions of citizens of Chicago and other cities of Illinois, Iowa, and Minnesota, by Mr. Harrison, of Indiana, and Mr. Cockrell, of Missouri. The latter gentleman also presented a memorial from the faculty and students of the Homœopathic Medical College of Missouri, protesting against the discrimination that is made in favor of one class of physicians alone in Government employment in all the offices except the Pension Office, and recommending the passage of the bill referred to above. All the petitions were referred to the Committee on Civil Service and Retrenchment.

INTRODUCTION OF INFECTIOUS DISEASES.—Mr. Palmer, of Michigan, presented resolutions of the State Board of Health of Michigan favoring legislation for the prevention of the introduction of infectious diseases into the United States, which was referred to the Committee on Epidemic Diseases.

THE SEVENTH REPORT OF THE GERMAN CHOLERA COMMISSION.—DR. KOCH, in his seventh report, dated Calcutta, March 4, and published in the *Deutsche medicinische Wochenschrift* of April 3, says that it is a surprising fact that the cholera, in its endemic sway, was very often confined to fixed localities, and it was at the same time evident that it was epidemic to a certain extent. Especially frequent were these small localized epidemics in the vicinity of the so-called tanks (these tanks, from which water is used for almost every purpose, are extremely numerous over the whole of Bengal). It is easily understood that, the water, being often left in the tanks after being used, becomes foul and is entirely unfit for use. It very often happens, also, that the latrines, if contrivances of the most primitive kind can be so called, are built on the banks of these tanks, and their contents find their way into the tanks, while the banks serve as repositories for every kind of filth and especially for human fecal matters. The tanks contain, therefore, as a rule, very filthy water, and it is under those circumstances accountable that the resident physicians should seek to establish a relation between an epidemic of cholera near such a tank, and the bad quality of the tank-water. These tank epidemics are not at all infrequent, and every physician who has a large experience with cholera knows of a greater or less number of examples. On this account I have from the beginning directed my attention to this point, and have requested the sanitary commissioner to inform me if any such epidemic should occur near Calcutta. Such a case occurred during the past week. At Saheb Bagau, near Calcutta, there were, during a few days, an unusual number of cases of cholera. The cases were confined to the immediate vicinity of one tank around which a few hundred persons lived, and there were seventeen fatal cases; whilst at a distance from the tank and in the whole surrounding police district there were no cases.

It is noteworthy that this same place was visited with cholera last year. At the beginning and during the course of the epidemic, the Commission made careful examinations, and found that the tank-water was used, in the usual manner, for bathing, washing, and drinking purposes, and that the soiled clothes of the cholera patients were cleansed in the tank. A number of examinations were made of water from different parts of the tank, and at different times, and investigated by the aid of gelatine cultures; cholera bacilli were found in tolerably large numbers in the first examinations. Later, when the epidemic was at an end, other examinations were made, and very few cholera bacilli were found in one tank only, and that in an especially filthy place. When it is considered that many examinations of tank-water, sewage, river-water, and various specimens of dirty water were made, and cholera bacilli were found only in a tank around which cholera was raging, these results must be regarded as most important. It seems established that the water in the tank was infected by cholera-washings which contained cholera bacilli in large numbers; further, it was shown that the dwellers around the tank used this infected water for house purposes and drinking-water. This furnishes, in a degree, the proof, which could not be obtained by experiments on animals, that the specific cholera bacilli are the cause of the disease.

This is one way, then, in which the cholera poison gets into the human system, and I do not doubt that in other similar cases the proof of the cholera bacilli in the water or other vehicle of the infective principle will be established.

Since my last report twenty cholera cadavers and the dejecta of eleven cases have been examined, which gives a total, of the examinations thus far made in India, of forty-two cholera cadavers, and twenty-eight cholera patients. These last cases have given no new results; they were precisely similar to the former.

Experiments have been made as to the influence of various substances, such as corrosive sublimate, carbolic acid, and other disinfectants on the development of the cholera bacilli in culture fluids, and also as to the behavior of the bacilli in carbonic acid gas and when excluded from the air. Experiments were also made with a view of discovering a permanent form (Dauerform) of the cholera bacillus, but so far nothing of the kind has been found. The single possibility, of causing the cholera bacilli to retain their viability for a long time, consists in their being preserved before becoming dry. In fluids they remain capable of development for a week, and everything seems to show that if they have only remained in a damp place and get into the human system they become active.

Further observations on this subject have now become very difficult on account of the hot weather. Last week the temperature was so great that it was only with the greatest difficulty that work could be carried on in the laboratory, and nothing can now be done except to end the work.

THE STATE MEDICAL SOCIETY OF ARKANSAS will hold its ninth annual session at Little Rock, on Wednesday, April 30th, and the two following days.

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ORIGINAL LECTURES.

CHRONIC NASAL CATARRH.

Two Clinical Lectures,

Delivered at the College of Physicians and Surgeons, New York.

BY GEORGE MOREWOOD LEFFERTS, M.D.,

PROFESSOR OF LARYNGOSCOPY AND DISEASES OF THE THROAT.

LECTURE II.

GENTLEMEN: A very essential principle in the local treatment of catarrhal affections of the nasal passages is thorough cleanliness; it underlies all others. There certainly can be little remedial value in the application of a medicated spray or powder that only reaches parts covered and protected by a layer of thick, tenacious mucus, or, still less, those encased in an armor of hard, inspissated crusts. On the other hand, I am convinced that this matter of cleanliness, if the latter be understood to mean frequent, daily, even several times a day, syringing of the nose, is overdone, and that it does much harm. The comfort, fancied or real, that a patient experiences after the use of his "nasal douche," even though this relief be only temporary, as it always is, leads him to repeat the process with constantly increasing frequency. Instances are not unknown where patients will use a quart of a strong saline solution under high pressure, through the nose several times daily. Physicians are not entirely guiltless in the matter, for it is not infrequently that the patient is misled by their belief that the cure of a nasal catarrh lies in the use of a "douche." Such practices, I repeat, are productive of no good, but much harm. Even apparent, temporary good effects ultimately fail. The use of strong saline solutions in large quantity, passed through the nares under high pressure, is not infrequently an efficient factor in the propagation if not in the causation, as I believe that I have many times seen it, of a chronic inflammation of the delicate nasal mucous membrane, with its usual result of permanent infiltration of the mucous and submucous structures. All this rather than a means for its relief.

While, then, cleanliness is essential, mechanical means for attaining it are to be used with great discretion. There is nothing curative in their employment, bear that in mind. They are by no means as generally necessary as was formerly supposed. I believe that in my practice I have discontinued their use in more than fifty per cent. of cases, and the latter not only do just as well, but better, being relieved of an element of irritation. All instruments then for cleansing purposes, and I include here the "nasal douche" with its many modifications, anterior and posterior nasal syringes, and the like—I even add cleansing sprays—are only necessary and are only to be used in exceptional cases of aggravated catarrhal inflammation, with accumulation of pent-up or hardened secretions, and in cases attended by the formation and firm impaction in the passages of hard, dense crusts, as in atrophic or fetid catarrh and in ozæna. In simple chronic rhinitis, and in some—perhaps one-half—of the cases of hypertrophic rhinitis their use is not required as a rule. The patient can readily remove the soft, semi-fluid secretions by simply blowing the nose; if he cannot, or if the secretions collect at the vault of the pharynx, one jet of spray containing some alkali or some "Listerine," thrown by you behind the velum or into the anterior nares, just prior to the use of the medicated spray or powder of which I shall speak in a moment, will be amply sufficient to loosen and remove them.

Let us suppose, however, that you are called upon to treat a case such as I have described, where the use of some instrument is a necessity in order that the pent-up or hardened secretions may be removed before you make your application of the remedial agent. What form of instrument shall you use? Which method prefer? Never use a "nasal douche," it is an inefficient instrument for the purpose for which it was designed, insomuch as it does not thoroughly wash or cleanse the nasal cavities, even when carefully used. I prefer, and I strongly advise you to employ, the instrument that I show you here, and which I devised some years ago. It is simply an apparatus arranged to throw a *very coarse spray* in the right direction into the anterior nares. The conical tip you see, closes one nostril completely, the fluid then enters one nasal passage and passes out by the other. Power is obtained by means of a double hand-ball tube. We call it the "nasal spray apparatus." With it the nasal passages and upper pharynx may, except in rare instances, be thoroughly cleansed of secretions and crusts by the use of less than one ounce of the medicated fluid, contained in its bottle or reservoir. Here, at once, is an immense advantage gained over the pint or even quart of fluid used commonly in the "douche." Being a *coarse spray* it washes up, loosens, and dislodges the secretions (unless they are firmly impacted in extreme cases) by the constant commotion of the fluid in the nasal passages, and this very readily and quickly. Explicit directions are to be given in every case to the patient for its use. I have had them printed, and now distribute them to you, they also accompany each box in which the instrument is sold.

In the severer forms of nasal disease—those attended by the formation and impaction of hard, dense crusts and masses in the nasal passages and upper pharynx—the use of this "nasal spray apparatus" will not be sufficient to dislodge them in the first instance, and a more powerful means (short of direct instrumental removal) must be employed. This result is best obtained by the "posterior nasal syringe," of hard rubber or metal, with a long, curved nozzle, which is used to cleanse the parts posteriorly (by way of the upper pharynx and posterior nares). This procedure is always disagreeable, sometimes painful, to the patient, and care must always be taken not to bruise the parts during the introduction of the nozzle of the syringe. Toleration will be established after a time. For cleansing purposes

through the anterior nares—an easier matter—the large, hard-rubber syringe of the aurist answers the purpose well.

Various cleansing and disinfecting solutions may be used by means of these instruments. I use with the "nasal spray apparatus," either one of the following: acidi carbolici, ℈j (this quantity is necessarily often varied to suit the susceptibility of different mucous membranes); sodæ biboratis and sodæ bicarbonatis, āā ℥j; glycerinæ and aquæ rosæ, āā ℥j; and aquæ, ad Oj; or, still better, sodæ bicarbonatis and sodæ biboratis, āā ℥ss; "Listerine," ℥j; and aquæ, ad ℥iv.

The "Listerine," in the latter formula, may not be familiar to you. It is a preparation that has lately been introduced by Lambert & Co., of St. Louis, containing the essential antiseptic constituent of thyme, eucalyptus, baptisia, gaultheria, and mentha arvensis in combination. Each fluidrachm also contains two grains of refined and purified benzo-boracic acid. Thus it may be used in this or in any of the other solutions of alteratives, astringents, and resolvents of which I shall have to speak (usually in combination with some proportion of water—2-10 to one part "Listerine," according to the indications), as a menstruum, and will be found to serve a useful and pleasant purpose where an antiseptic is desirable. The thyme and eucalyptus, besides being disinfectants, act also as stimulants to the mucous membrane. Where a much larger quantity of a cleansing solution is necessarily used, as with the anterior or posterior nasal syringe, simple warm water, with the addition of borax—ten grains to each ounce—or "Listerine" in the proportion of one part to from two to ten of warm water, will answer the purpose. I sometimes—when the disagreeable odor is strong—use, after a thorough syringing with an alkaline solution, a *spray* of equal parts of "Listerine" and water; it destroys fetor very quickly, and substitutes for it the pleasant odor of the thyme.

Let me say here—what you have probably noticed—that I use no sodium chloride in any of these cleansing solutions; I believe that it does more harm than good, that the saline solution favors endosmosis as it passes over the nasal mucous membrane, and therefore increases rather than diminishes intra-nasal swelling.

Having shown you now how the parts may be cleansed, if this be necessary, I turn to the question of the direct *medication* of the disease which affects them. If I exclude for the moment the use of caustics and of surgical measures in the management of catarrhal conditions of the nares, the treatment is based practically either upon the employment of various *medicated fluids* used in spray by means of some form of atomizer, or upon the use of *medicated powders*, applied with the anterior or posterior nasal powder-insufflator in one of its various forms. Both methods have their warm advocates. My own experience prejudices me strongly in favor of the *spray*. I believe that with a proper spray-tube, and a pressure of compressed air of about forty pounds to the square inch, no more perfect application can be made to the parts. This should always, if possible, be through the posterior nares. The patient depressing his tongue by means of a spatula, the velum palati must be drawn forwards, that is, away from the posterior pharyngeal wall, by means of a suitable metal hook covered by bougie material, a procedure that can be readily accomplished in *all* cases after a little practice, and one that I regard as *absolutely essential* to the thorough success of the application, as it is the only way in which a practicable degree of space can be gained through which to throw the spray upwards and forwards through the nasal passages. To attempt an application with the velum drawn upwards and backwards closely approximated to the pharyngeal wall is nonsense. In this position it will be found the moment that you introduce your spray-tube into the patient's mouth in nine cases out of ten. The palate-hook is held in the operator's left hand, his right holds the spray-tube, and the spray is thus thrown upwards into the vault of the pharynx and forwards through both nasal passages, so that it appears at both nostrils in a fine cloud. Such an application is thorough and complete, not painful nor even very disagreeable to the patient. That the results obtained by a series of such, far exceed those obtained by any other method, ample experience has shown me.

I prefer the high pressure of compressed air to the lower power, so often recommended. I have never done harm to the mucous membrane with it, and the increased power of propulsion in the cloud of spray renders it possible to reach all of the many irregularities and recesses abounding in the naso-pharyngeal passages. I say nothing here except in condemnation of the practice of *forcing* a probe or cotton-holder, charged with a solution of nitrate of silver, up behind the velum in spite of the violent muscular contraction of the parts, or of the use of small brushes, called "post-nasal," used in the same way, which, from their very size, form, and length, render it a physical impossibility to reach the vault of the pharynx, still less the posterior nares, or to enter the latter; medication by such means amounts to little.

But it is hardly to be expected that the general practitioner will be able to command the use of a costly compressed-air apparatus with air-pump and spray-tubes, such as I show you here; then in default of this apparatus, the ordinary "hard-rubber atomizers," which can be bought at a moderate price everywhere, and which are constructed upon the principle of either Richardson or Bergson, must be used, and can be, with good effect. A very good atomizer is manufactured by the Davidson Company, and called Hard-rubber Atomizer, Continuous Spray, No. 61. In all, the propelling power is developed by the use of the hand air-bulbs; these should always be double. The hard-rubber tube of the instrument is provided with two separate tips, so that the spray may be thrown upwards (naso-pharynx), or directly forwards (anterior nares). The disadvantages of this instrument, which make it inferior to the use of the compressed air apparatus, are the length of time that it takes to develop the propelling power by means of hand-ball pressure, an important point when the instrument is in position in an irritable throat, and the fact that both the operator's hands are required to work it, and that, therefore, he cannot use the "palate-hook" to draw the velum forwards. You will rarely find a patient with a throat tolerant enough to allow you to throw the spray, with this instrument, up into the vault of his pharynx and posterior nares without the use of the "palate-hook," and you had better, therefore, confine yourself to applications made through the ante-

rior nares and forced well back into the pharynx, if you use it.

The most useful forms of powder-insufflator I show you here. One, you see, is arranged to deliver, by means of the air-pressure developed by these hand-balls, a charge of the finely pulverized powder with which the bottle is charged into the anterior nares; the other, with a longer curved tube, performs the same operation in the posterior nares.

Personally, I place very little reliance on the various "pocket inhalers," etc., that are popularly recommended for the cure of "catarrh." Ammoniated and iodized preparations sometimes exercise a temporary benefit, but they can also readily do harm, if used to excess. Remembering this, if you choose to recommend them for the moral effect they exercise upon your patient, I have no objection.

I ask your attention now to the specific *remedial* treatment of the various forms of rhinitis. *Simple chronic rhinitis* requires, first, thorough preliminary cleansing of the passages. This may be accomplished usually by the patient using his handkerchief, unaided by any artificial form of apparatus. If the latter, in exceptional instances, be requisite, use the "nasal spray apparatus," with one of the given solutions. The post-nasal syringe is never required in this form of the disease. Following the cleansing process comes the remedial, which must be undertaken by physician or patient, with at first daily, and then gradually diminishing frequency, until, at length, a time is reached (after several weeks) when the patient is told to present himself for treatment only when he develops, if he should, a recurrence of any old symptoms, or an attack of acute rhinitis. This consists in the application of the medicament, usually a mild alterative, resolvent, or astringent solution or powder. If the *spray* apparatus, with compressed air, and some medicated solution, be chosen as the means, as I advise, some one of the following formulæ may be used, with preferably the *post-nasal* spray tube, but also with the anterior, or both. If the "hard-rubber atomizer" is the only instrument available, then the spray is thrown through the anterior nares. 1. Zinci iodidi, gr. v–℥j; 2. Zinci sulpho-carbolatis, gr. v–℥j; 3. Zinci sulphatis, gr. v–℥j; 4. Ferri et ammoniæ sulphas, gr. v–℥j; 5. Ferri perchloridi, gr. v–℥j; 6. Acidi tannici, gr. v–xx–℥j; 7. Potassæ chloratis, ℈j–℥j, are the solutions that I most commonly use, given in the order of their preference. In any of these formulæ, "Listerine" may be substituted, in part, for the water, in the proportion of one part of the former to three of the latter. I ordinarily do so. If the simple rhinitis has advanced far towards the hypertrophic stage, then I commence at once with: Iodini cryst., gr. iv; Potassæ iodidi, gr. x; Zinci iodidi, ℈j; Zinci sulpho-carbolate, ℈j; "Listerine," ℥j; Aquæ, ad ℥iv, as a spray. These applications should always be selected with due deliberation, in view of the special indications presented by the case, care being exercised that the application is of such a strength as to cause *no irritation* of the nasal mucous membrane, one much more susceptible than that of the pharynx or larynx. A preliminary trial of the strength of the solution should always be made.

In case these spray-applications are not well borne, or perhaps in accordance with the special views of the physician, a medicated powder may be substituted. Powders are particularly adapted to the treatment of this form of the disease, where the secretions are readily removable, the parts soft and absorptive. In hypertrophic rhinitis they are, I believe, of little use, and in atrophic or fetid rhinitis contra-indicated. One such powder as, for instance, the following, may be applied by means of the anterior, or, if possible, the posterior nasal powder-insufflator that I have shown you: Acidi salicylici, gr. x; acidi tannici et bismuthi subcarb., āā ℥j; or this, Ferri et ammoniæ sulph., ℈j; pulv. amyli, ℥j. Other combinations will suggest themselves.

Whatever be the plan of treatment instituted, not alone in this but in the other forms of rhinitis as well, and its details may readily be determined upon from what has and will be said. It is to be *steadily persevered in*, not necessarily in all cases under the direct manipulation of the physician himself, but certainly in all cases under his general supervision, and at suitable intervals, which will vary according to the grade of the disease, until the morbid conditions for which it was undertaken are alleviated. Daily applications at first, then three times weekly, then twice, and finally at increasing intervals dependent upon the indications, until a period of at least eight to ten weeks has been covered, will be the rule. The necessity even now for the immediate treatment of any subsequent recurrence of old symptoms, which will quickly yield, and for any attacks of acute rhinitis, which may or may not occur, I have spoken of. All this is tedious to the patient, I know, but, Gentlemen, there is no royal road to the successful treatment of nasal catarrh.

In speaking to you now of the treatment of the next form—*hypertrophic rhinitis*—all that I have just said is applicable to its earlier stage, except that instrumental cleansing will often be requisite; that occasional use of the post-nasal syringe is a necessity; and that I prefer to commence at once with the formula of iodine, iodide of potash, zinc, etc., that I have given you. If the disease is moderate in extent, and the hypertrophy of the tissues not excessive, complete resolution may be effected by these means. On the other hand, if the process be first seen, as it so often is, in its advanced stages, when a firmly organized neoplastic tissue exists in a large degree, and seriously encroaches upon, even occludes, the nasal cavities, associated with a chronic inflammation involving the greater part of the upper pharyngeal mucous membrane, and hypertrophy of the adenoid tissue at the vault of the pharynx, the above plan of treatment, as a curative means, is *useless;* some alleviation of the more prominent symptoms may be obtained, but more heroic measures will be required to cure, chiefly the use of some means by which the hypertrophied membrane and tissues can be destroyed. I am bound to admit that it is in the use of these means, mainly surgical, and in this form of rhinitis, that you will attain your most speedy, complete, and brilliant cures. The destructive agents that are at your command are fuming nitric acid, glacial acetic acid, chromic acid, the galvano- or actual cautery, and nitrate of silver. These I have mentioned in the order in which I would select them for use in any case. I now add the Jarvis écraseur, and, for the adenoid growths of the pharynx, the post-nasal forceps.

The little operation that I am about to describe to you first, is one that you will often find necessary; you can

readily perform it, and I assure you that it will give most gratifying results.

Let us suppose a case of hypertrophic rhinitis in which you find the hypertrophied mucous membrane located mainly over the inferior turbinated bone, in one or both nasal passages; there is partial, intermittent, or permanent occlusion occasioned by its presence. Take a small probe, its end wrapped in absorbent cotton, and saturate this with *nitric acid*, press out the excess of acid, pass it then through a suitable nasal speculum into the naris to be operated upon, under the guidance of a good reflected light from your forehead mirror, and with a steady hand now draw it along, or press it firmly upon, the turbinated bone at its point of greatest convexity, contact being kept up for a few seconds. The pain quickly passes away, and on withdrawing the probe the parts are seen to have become well whitened or blanched; moderate inflammatory reaction with a slough of varying depth follows, while the consolidation of the sub-mucous tissues by the hyperplastic results of the inflammatory process, and the contraction of the cicatricial tissue occupying the site of the destroyed parts, serve to reduce the hypertrophy and its resultant nasal obstruction in a most satisfactory manner. Frequently, one application answers all purposes in freeing the nasal passage to the extent of allowing of uninterrupted respiration. The process, however, may require repetition.

The operation with *glacial acetic acid* is performed in the same manner; it is less painful, causes little secondary inflammation, and destroys less tissue. This agent, then, may be selected for the more moderate and more recent cases of hypertrophy.

Chromic acid is less painful in its use than nitric; its fumes, though, are distressing to the patient. It possesses no advantage, for our purpose, over the other two.

The *galvano- or actual cautery*, either for the destruction of tissue in the nasal passages or at the vault of the pharynx, is, of course, a radical and efficient agent. I allude to the former; the latter is hardly ever used. Its action is rapid, complete, and not very painful; but as its use requires much skill, especially when employed in the naso-pharyngeal region, you will probably prefer to entrust such cases to the hands of the specialists. Instances where it will be required are not very many, for I believe that we may accomplish the same results with less heroic means. A full description of the instruments, and the method of using them, will be found in most works on diseases of the throat and nose, and to these I refer those of you who care to pursue the subject.

Nitrate of silver, as a destructive agent, I mention but to condemn. It causes but a superficial slough, and the application is of necessity frequently repeated in treating hypertrophied tissue of any extent; moreover, owing to its powerfully stimulating qualities, it excites cell proliferation, and causes structural changes that are not desirable.

After the use of any form of *caustic* in the nasal passages, immediately upon the withdrawal of the probe, the parts should be flooded with an alkaline solution. The subsequent treatment of the case, at least until the slough has separated, and the resultant ulcer healed, is based upon ordinary principles of cleanliness.

Now, there are two forms of hypertrophy of the tissues over the inferior turbinated bones that are occasionally met with clinically, and which cannot be successfully treated by any of the methods of which I have thus far spoken. The operations for their relief need then a special description. You will be able to perform them readily when you have acquired a little skill in intranasal surgery. There is no reason why you should not attempt them. The *first* is where the hypertrophy is *excessive* and is mainly limited to the *anterior extremity* of the turbinated bone; to remove it, which you must do surgically, the procedure devised by Dr. Jarvis should be undertaken. The growths are usually sessile, but can be readily engaged in a loop of fine steel wire passed through a delicate *écraseur*, devised by the same surgeon, if their base be first transfixed with a slightly curved needle, until the point projects above the growth into the nasal cavity. The wire loop is then arranged in such a manner that the portion of the needle projecting from the nostril, as well as the needle's point, is encircled by it, very much after the manner of a hare-lip suture. The wire loop is thus prevented from slipping off, and a portion of the hypertrophied tissue is readily secured, and is removed by screwing down the milled nut of the *écraseur* and drawing the wire home. This little operation is quickly done, and is not very painful or bloody; the relief that it affords is great.

More common than the above, is excessive localized hypertrophy of the mucous membrane covering the *posterior extremities* of the inferior turbinated bones. It may be, as I told you in the first lecture, of such an extent that nearly the whole posterior naris is occluded by an irregular, grayish or whitish, sessile tumor, which projects outwards into the free space of the pharynx. Owing to its peculiar position it cannot be safely reached and destroyed by any caustic method, removed it must be to cure the patient. The small *écraseur* already mentioned, here again affords a satisfactory and efficient means for its entire extirpation. The instrument is passed through the nasal passage upon the affected side, the size and location of the growth having first been carefully studied, and the form of the wire-loop arranged accordingly, and no great difficulty will be experienced in ensnaring it. Slight traction on the instrument, and a few turns of the milled nut will now receive it firmly in the loop, and the mass is then *slowly* cut through by tightening the wire. This little operation alone, if judged by its results, constitutes one of the most marked advances of recent rhinoscopic surgery.

Still another special operation is required in cases in which the hypertrophy of the *glandular structures* at the vault of the pharynx is excessive, as is so often seen in young subjects, the victims of a hypertrophic rhinitis. The tumor thus formed, which we term *adenoid tumor* or *adenoid vegetations*, varies, as I have said, greatly in size and configuration, but if it be large enough to interfere with nasal respiration, if it modify the voice, and threaten danger to the middle ear by pressure upon the Eustachian orifices, if it give rise to excessive secretion and cause general discomfort to the patient, there is no question but that its removal is indicated. On the other hand, I would warn you against the too ready and indiscriminate extirpation of these

tumors. A certain degree of thickening of the tissues at the vault of the pharynx is not an uncommon condition in young children, who suffer from no symptoms of nasal catarrh. Again, this structure atrophies normally towards puberty. To interfere with it surgically, therefore, simply because it exists, seems to me to be a grave mistake.

Should you determine, however, after what I have said, that its removal in a given case is proper, resort at once to surgical measures, for medicated sprays are totally ineffectual, and caustics are of little use, as well as difficult of thorough application. A pair of long forceps, such as I show you here, suitably curved, to be passed behind the velum and furnished with cutting blades at their extremity (Woakes' forceps, modified by Semon), will be the best means. With them you may undertake the operation with confidence, even though you possess but limited experience. With care and some anatomical knowledge you can do no harm to contiguous parts; the operation, seemingly formidable, is, in reality, simple. Hemorrhage is slight, ceases spontaneously, and inflammatory reaction is never such as to excite any apprehension—at least, such is my experience. When the hypertrophy of the tissues extends broadly, in the shape of small, slightly elevated nodular masses, over the entire pharyngeal vault, a sharp curette such as is used in uterine operations, but suitably curved to pass behind the velum into the upper pharynx, will answer a better purpose in scraping away the vegetations than the forceps, which would here be difficult of exact application.

I need not detain you long in speaking, in conclusion, of the local treatment of *atrophic* or *fetid rhinitis*. Unfortunately, the disease is beyond our powers of cure. The best that we can promise the patient is to mitigate his urgent symptoms. I am well aware, in making this statement, that some profess to cure; I have not been so fortunate as to obtain this result. Our indications for treatment are twofold: first to cleanse and disinfect, and then to keep clean and disinfected, the nasal passages of all decomposing crusts and secretions; and, second, to stimulate the atrophied mucous membrane, with a view to the regeneration of function and character of secretion in the muciparous follicles and serous glands, if this latter can be accomplished, a matter which my experience has led me strongly to doubt. The first indication is met by the daily use of the anterior or post-nasal syringe, occasionally by the necessary direct removal of hard crusts by means of forceps, and thorough washing of the passages with an antiseptic and alkaline solution until all offending secretions are removed. I have given you some formulæ suitable for this purpose; others are: glycerini acidi carbolici, ʒjss; sodii biboratis, ʒj, aquæ, Oj: liquoris potassi permanganatis, ʒjss, sodii biboratis, ʒj, aquæ, Oj: acidi salicylici, gr. x, sodii bicarbonatis, ʒj, aquæ, Oj. I, as well as my patients, prefer the solution with "Listerine," given above.

The second indication requires the use of such drugs as sanguinaria, galanga, carbolic acid, creasote, salicylic acid, iodine, bromide of potassium, etc., which are recommended by Dr. Bosworth as efficient in the early stages of the disease. They are mentioned in the order of preference, and should be used in solution, by means of the atomizer. They probably act by giving rise to a local irritation of the mucous membrane, which in turn leads to a stimulation of the glandular structures, and an increased discharge of serum and mucus. Dr. Seiler advises, on the contrary, nitrate of silver in powder diluted with starch, and says that it has given him good results. As next in effectiveness, he recommends the use of a weak solution of the sulphate of iron and ammonia. My own experience with any of these means has been limited; such as I have used have been ineffectual in their results, and I can therefore only reiterate my belief that, in the present state of our knowledge, the disease is incurable.

This finishes, Gentlemen, what I have to say to you upon this special subject of chronic catarrhal diseases of the nose. My remarks have, necessarily, been drawn out to some length, and have occupied some time; if, however, I have succeeded in convincing you that *all* is *not* simply "nasal catarrh" that comes to your net, if I have taught you to recognize, by my descriptions, the various forms of chronic rhinitis, and shown you how to treat each intelligently, according to its individual indications, the time will not have been misspent, and the purpose of these lectures has been accomplished.

ORIGINAL ARTICLES.

WOUNDS OF THE INTESTINES.[1]

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THERE are few topics in surgery that have received less attention than the nature and treatment of wounds of the intestines. Even our text-books say very little upon the subject, and that little is seldom founded upon original observation. When we consider the frequency of these lesions, their great gravity—if not almost uniform fatality, and the doubts and misgivings with which they are approached by most practitioners, it will not require any apology on my part for bringing the matter formally before this meeting.

While every other branch of surgery has been enriched by papers and monographs almost in countless numbers, the literature of wounds of the intestines is exceedingly scanty, and, in many respects, unsatisfactory. The older writers have transmitted to us nothing of value, and even as late as the close of the last and the beginning of the present century not one of our systematic writers had any fixed or settled notions upon the subject. The author who came nearest to this was Benjamin Bell, of Edinburgh, whose *System of Surgery*, in six octavo volumes, published nearly one hundred years ago, did much to diffuse a taste for surgery, not only in Scotland and England, but on the Continent of Europe and in the United States. It is an interesting fact that the first foundation of a rational treatment of lesions of this kind was laid in this country in 1805, by Dr. Thomas Smith, of St. Croix, in his *Inaugural Dissertation*, presented to the Faculty and Trustees of the University of Pennsylvania. His

[1] Read before the American Surgical Association, April 30, 1884.

experiments, twelve in number, were performed upon dogs, with a view, mainly, it would seem, of ascertaining the best mode of sewing up wounds of this description, without going at all into the question of their mode of repair. Seven years after this, namely, in 1812, appeared the admirable treatise of Benjamin Travers, of London, entitled, *An Inquiry into the Process of Nature in Repairing Injuries of the Intestines*. His researches were more especially directed to the elucidation of penetrating wounds, and to the proper management of the bowel in strangulated hernia—topics discussed in a very able and scientific manner. In conducting these researches, the English surgeon availed himself of experiments upon dogs, and of the ample clinical opportunities afforded him at Guy's and St. Thomas's Hospitals. I need hardly add that Mr. Travers's essay was one of the most original and important contributions made to surgical science in the early part of the century. The work was not republished in this country, and did not, I think, excite much attention even on the other side of the Atlantic. For a knowledge of its valuable contents the surgeons of Europe and America were mainly indebted to that storehouse of surgical facts, Prof. Samuel Cooper's *Surgical Dictionary*, a work of world-wide celebrity.

Among the French surgeons who in the first third of the present century busied themselves in enlarging our knowledge of the treatment of wounds of the intestines by an appeal to experiments upon the inferior animals may be mentioned, with special commendation, the names of Jobert, Lembert, Gély, Amussat, and Choisy, on account of the peculiar forms of sutures respectively recommended by them.

Convinced that this department of surgery was susceptible of still further investigation, I commenced a series of experiments in 1841, which was continued, with occasional intermissions, until the end of 1843, when an account of them was published in the *Western Journal of Medicine and Surgery*, issued at Louisville, under the editorship of Drake, Yandell, and Colescott. A small edition was also issued in separate form, but as the printing office in which it had been stored away was soon after consumed by fire, few copies were saved. Hence the reason why such little notice has been taken of my labors. Indeed, the only account I have ever seen of them is comprised in the *Surgical History of the War*.

The object which I had in view in undertaking these researches was, first, to ascertain the process employed by nature in repairing wounds of the intestinal tube; and, secondly—and more particularly—to determine, if possible, the best methods of treatment. The experiments, upwards of seventy in number, were performed exclusively upon dogs, as the most eligible animals that could be selected for the purpose. The wound was generally made in the small bowel, not only because it is more readily accessible than the large, but because, when injured, it is more liable to give rise to extravasation of fecal matter, and also, possibly, to high inflammation.

Gunshot injuries of the bowels, so common during the War of the Rebellion, are more ably and fully discussed in the *Surgical History of the War* than in all other works put together, and what is true of wounds caused by firearms is equally true of other injuries of the intestinal canal. Dr. Otis spared no pains to embody in his chapter on this subject the latest information to be found in the magnificent medical library accessible to the Surgeon-General of the Army and his intelligent and laborious assistants, to whom the profession is so much indebted for our Army Medical Reports.

Wounds of the intestines may, like similar lesions in other structures, be incised, contused, lacerated, or punctured, the latter including those made by gunshot. Incised wounds are occasionally inflicted accidentally upon the bowel in hysterectomy and ovariotomy, and in operations performed for the relief of strangulated hernia. All injuries of this kind of the intestinal tube, whether single or multiple, simple or complicated, derive their chief importance from two sources—escape of fecal matter and peritoneal inflammation. The accompanying hemorrhage is generally a subordinate occurrence.

The manner in which wounds of the intestinal tube are repaired depends very much upon their character. Simple incised wounds, if properly treated, heal by union by the first intention, as similar wounds involving the skin, muscles, and other structures; that is, the effused plasma soon becomes organized and is transformed into cicatricial tissue. When the suture is carried through the mucous membrane the healing process is more tardy, and, if some of the stitches should give way prematurely, so as to allow the edges of the wound to gap, the union will be effected mainly through the agency of the serous coat. Granulations always form with difficulty, aud rarely afford much aid in filling up the breach. In nearly all of my experiments upon dogs, I noticed that the wounded bowel at the seat of the injury was speedily glued either to the omentum or to some adjacent coil of intestine, thereby forming, in most cases, an effectual barrier to fecal effusion. Conjecturally, we may assume that a similar occurrence obtains in a human subject. The ligatures, when the ends are cut close, are always discharged into the interior of the tube, the period at which this takes place varying with many circumstances from ten to fourteen days, as the ordinary average, to three or four weeks, as the extreme. Lacerated, ragged, contused, punctured, and gunshot wounds heal in the same manner as incised, but the process is more tardy and more liable to fail. When wounds, of whatever kind, are left to themselves, or to the unaided efforts of nature, the subjects of them either perish from their effects, as fecal effusion, peritonitis, hemorrhage, or septicæmia, or, if they recover, their safety is due to the adhesions which the injured portion of the tube contracts with the surrounding parts.

The diagnosis of wounds of the bowel is a matter of primary consideration, as upon its prompt determination the success of our treatment must mainly hinge. The possibility of this will, of course, mainly depend upon the situation in which the bowel is found at the time of the accident. If it has escaped

through the wall of the abdomen, it will generally be easy to find the injured part by the egress of some of its contents, as feces, mucus, or bile, or all these together; and so also when there is a discharge of some, or all, of these substances through the outer wound, although there be no protrusion of the intestine. The coast in both of these conditions is sufficently clear, so clear, indeed, that he who runs may read and accurately interpret. But it is altogether different when the abdomen has been pierced by a narrow instrument, as a knife or a dirk, or perforated by a bullet. In such an event the bowel does not protrude, and hence the true nature of the case must be solely a matter of conjecture. All that is positively certain in such event is that there is a wound in the wall of the abdomen. The surgeon, especially if called immediately or soon after the receipt of the injury, must be in doubt whether the weapon has entered the bowel or not. In reflecting upon the subject, he recalls the fact that a bullet, a rapier, a sword, or a ramrod has occasionally passed through the abdomen, and, perhaps, even emerged at the opposite side, without, in the slightest degree, interfering with any of its contents. The records of surgery furnish many such cases.

The two principal signs which must serve to guide us in these uncertain cases are tympanites and a discharge of blood by the anus. The occurrence of tympanites is unquestionably a symptom of great value. Jobert, who was the first to notice it, regards it as the most reliable of all the phenomena when there is no escape of feces, mucus, bile, or other fluid at the abdominal wound, and in this opinion the results of my personal observation fully coincide. The tympanites supervenes at various periods; sometimes almost immediately after the wound in the bowel has been received, and is then always of proportionate diagnostic value; at other times it supervenes very gradually, and in some cases, again, it does not make its appearance under twenty-four, thirty, or thirty-six hours. However this may be, it is always diffused, not circumscribed, and sometimes reaches an enormous height, the belly emitting a hollow, drum-like sound on percussion, and is then always very painful.

Although tympanites is generally present in lesions of this kind, there are cases in which it is entirely absent, as, for example, when the wound in the bowel amounts to a mere puncture, in which the opening is effectually closed by the protrusion of the mucous membrane, thereby preventing all escape of gas into the peritoneal cavity.

A discharge of blood by the anus I regard as a very valuable symptom of the existence of a wound in the bowel. It is especially valuable when it makes its appearance within a short time after the infliction of the external wound, and when it continues, more or less abundantly, for some days afterwards. As the blood is always intermixed with the contents of the bowels, it seldom comes away in a pure state, but is generally of a dark color, and of a grumous consistence.

No useful conclusions can be deduced from the shock and the pain which attend lesions of this character, since both vary greatly in different cases and in different circumstances, some persons suffering very little, while others, owing to the peculiarities of their nervous endowments, experience extreme distress.

In regard to probing wounds of this kind, the universal sentiment of the profession is opposed to it, on the ground that, while it can do no good, it would often be productive of great harm by disturbing the relation of parts, and thus endangering fecal effusion. I do not think, however, that this rule should apply to the mural wound. Here a probe, properly used, might at least afford useful information in regard to the direction and extent of the external injury.

In the treatment of wounds of the intestines two leading indications are scrupulously to be kept in view—the prevention of fecal effusion, and the occurrence of peritonitis. To secure the first, the only safeguard is efficient suturing of the wound. A case, it is true, occasionally recovers without any precaution of this kind, but this is owing to good luck rather than to good treatment. There was a time when surgeons, even of great distinction, considered the employment of sutures in wounds of the bowel utterly useless, if not absolutely detrimental. John Bell, a specious writer and an eloquent lecturer, who flourished in the early part of the century, and one of whose chief delights it was to walk roughshod over the teachings of his predecessors and contemporaries, declared that, if there be in all surgery a work of supererogation, it is the sewing up of a wounded gut. He taught that there was no peritoneal cavity, and that, consequently, there could be no fecal effusion in wounds of the bowel. The illustrious Scarpa, of Italy, for a long time the only great surgeon of that country, was equally prejudiced against the use of sutures; he considered them not only useless, but even dangerous. The practice in those days, and even at a much later period, was, in all lesions of this description, to pass a suture through the wound, and to bring out the ends at the external opening, a practice necessarily and inevitably followed by an artificial anus, and one by no means always, if indeed generally, free from the risk of fecal extravasation. The late Professor Gibson, of Philadelphia, writing in 1838, advocates a similar procedure; and Professor Syme, of Edinburgh, four years later, expressed himself to the same effect. These views may be regarded as a pretty correct expression of the teachings of surgeons in regard to this class of injuries forty-five years ago, notwithstanding the light that had been thrown upon them by Travers, Sir Astley Cooper, Lawrence, and others in England, and Jobert, Lambert, Gély, Choisy, and others in France.

The question here naturally arises, Should all wounds of the bowel, however small, be sutured? Upon this subject there was certainly till recently, if indeed there is not still, some diversity of opinion. Dionis, Palfin, Heister, and Sabatier state that enterrorhaphy is unnecessary when the wound does not exceed the diameter of a goose-quill or a penknife; and views of a similar nature are to be found in other writers, as Sharp, Richerand, Boyer, and

Jobert. On the other hand, there are surgeons who are opposed to the return of the bowel into the peritoneal cavity, however small the intestinal wound, without the employment of sutures, lest fecal extravasation should ensue. The great Benjamin Bell, of Edinburgh, writing near the close of the last century, holds, in the midst of the darkness that surrounded him, the following emphatic language: "However small a wound," he says, "of the intestine may be, it ought always to be secured with a ligature, for although it is alleged by some that we should rather trust to nature for the cure of a small opening than to insert a ligature, to me it appears that the opinion is by no means well founded, insomuch that I would not leave even the smallest opening that could admit either feces or chyle to pass, without stitching it up. Much danger may ensue from omitting it, and the hazard of the patient cannot be increased by the practice being adopted."

This advice of the sagacious Scotchman so clearly and emphatically enunciated nearly a century ago, is now the universal practice in all cases of wounds of the bowel, however diminutive, based as it is upon the well-ascertained fact that enterrorhaphy, when properly performed, is a harmless operation as compared with the risk of fecal extravasation and the consequent certainty of peritonitis.

It was with a view of testing this very matter, by determining how far even a small wound of the bowel might safely be entrusted to nature for a cure without the aid of sutures that I was induced to undertake the elaborate series of experiments alluded to in the opening part of this paper. These researches afforded abundant proof of the correctness of Mr. Bell's views; for, although I found that the wound, when it did not exceed two lines, or the sixth of an inch, was always closed by the intrusion of the mucous membrane, yet this did not always protect the parts from the effusion of fecal and other matter. Hence I have ever since laid the greatest stress, both as an author and as a public teacher, upon the importance of close suturing in all wounds of the intestines, however small. It is easy to conceive that even a very small wound, although completely occluded by the mucous coat at the moment of the restoration of the bowel, might, by the transit of stercoraceous matter, or by violent peristaltic action, become so unlocked as to admit readily of the escape of fluid or solid substance into the peritoneal cavity. Let it ever be borne in mind that the smallest possible quantity of fecal matter would be sufficient, certainly in many cases, if not in all, to light up fatal inflammation; and let this fact serve as the keynote to our practice in all cases of wounds of this description.

Judging from the results of my own observations, I have long been of the opinion that there are only two sutures that should ever be employed in sewing up a wounded bowel. These are the continued and interrupted, with the modifications of the latter by Lembert and Gély. As to Jobert's method, which consists in invaginating the ends of the bowel, when completely cut across, so as to place the two serous surfaces in immediate contact to facilitate their prompt union, the operation is not only extremely difficult, but very liable, even if successful, to be followed by more or less contraction of the tube at the seat of the injury, thereby interfering more or less seriously with the transmission of its contents.

The interrupted suture is, as a rule, preferable to the continued in all wounds of the bowel, whatever their extent or direction, whether they embrace the entire calibre of the tube or only a limited portion, and whether they are circular, oblique, or longitudinal. The operation executed with a long, slender sewing-needle armed with a thin but strong, well-waxed silk thread, is comparatively simple, affords ample security against fecal effusion, and is never followed by injurious contraction of the tube. The sutures should be placed not more than one line and a half, or the eighth of an inch, apart, and the ends, tied in a double knot, should be cut off close, so that, in time, the sutures may find their way into the bowel and be discharged along with its contents. I deem it very important that each suture should be fully one line from the edge of the wound, and that the needle should be passed deeply through the wall of the bowel instead of embracing its entire thickness, an arrangement which would almost inevitably be followed by more or less puckering, and by the consequent retardation of the cure. The operation of uniting the bowel where the division is complete, will be greatly facilitated if the first suture be inserted at the mesentery and the second immediately opposite.

The best, certainly the safest, ligature for suturing a wounded intestine is ordinary sewing-silk, well waxed, and inserted with a long, sharp sewing-needle. The carbolized catgut ligature is liable to give way prematurely, and should, therefore, be avoided.

In the modification of this suture by Lembert, the object is to invert the edges of the wound so as to bring the two serous surfaces in immediate and firm contact to establish, as it were, union by the first intention. Great advantage has been claimed for this form of suture, but this is not so apparent when it is remembered that, unless great care be taken in introducing it, it is liable to be followed by more or less contraction of the tube. In making this suture, the needle makes two dips on each side of the wound instead of one, as in the ordinary procedure.

"Gély's suture, which is merely a modification of that of Lembert's, is made with two needles inserted near the angle of the wound, about one line from its edge; they are then carried along the interior of the bowel, parallel with the wound, for the sixth of an inch, when they are brought out precisely at the same level, so as to appear again on the peritoneal surface. The threads are then crossed, the right needle being passed through the puncture made by the left, and conversely, when the ends are firmly tied and cut off close as in the ordinary operation. The number of sutures varies, of course, according to the extent of the cut. In this way the edges of the wound are thoroughly inverted, and consequently all danger of fecal effusion is pre-

vented; the coaptation, in fact, is so accurate as to conceal the ligatures."[1]

The treatment of wounds of the bowel by the continued suture has afforded good results in my experiments upon dogs. The chief objection to it is that it leaves the edges of the wound in an uneven, puckered condition, which interferes perhaps somewhat with rapid union. This, however, may be prevented in great degree, if not wholly, by the employment of a double thread after the fashion of the glover, although I do not consider this at all essential to success. Of the seventeen experiments performed with a single ligature, not one terminated fatally. The wounds in two of the cases were transverse, oblique in three, and longitudinal in twelve. The wound in one of the latter was six inches in length. The dog, a large, old one, was killed on the twentieth day, when every trace of suture had disappeared, with the full restoration of the calibre of the tube. I must not omit to state that in all these experiments the suture was passed through the fibrous tunic of the bowel, or, in other words, outside the mucous membrane. We have here then also a very valuable suture for sewing up wounds of the intestines, especially well adapted to the treatment of longitudinal and oblique wounds; not so well, I think, to the treatment of transverse ones as the interrupted.

The suturing of the wound having been completed, and any foreign substance that may be present removed, the bowel is restored to its natural situation, followed by the omentum, in the event of its prolapse. It is hardly necessary to say that the protruded structures should be treated in the most gentle manner; any wiping that may be required should be performed with the softest cloth, and all firmly adherent matter should be picked off with the forceps. Generally speaking, the best way of cleaning the parts is to make free use of the syringe, charged with warm water. The operation may be completed with a one to one thousand solution of corrosive sublimate. The return of the bowel will be materially facilitated by the use of a little olive oil. If any serious obstacle offer, it must be surmounted with the probe-pointed bistoury, or by puncture of the tube, if it depend upon the presence of gas. The wound in the wall of the abdomen should be closed in the same manner as in ovariotomy, the sutures being carried through the peritoneum so as to protect the parts effectually against hernial protrusion, a thing never to be lost sight of after such lesions.

The question arises here, What should be the conduct of the surgeon when the bowel is wounded, but not prolapsed, owing to the small size of the mural opening? I do not think that I can answer this question better to-day than I did forty years ago, when we knew comparatively little of abdominal surgery, and when the most visionary enthusiast could not have dreamed of half the triumphs that have since awaited it. The case in question is a suppositious one, and is thus stated: "A man, after having indulged in a hearty repast, receives a penetrating wound in the abdomen from the thrust of a dirk or knife; the bowel is pierced, or, it may be, nearly divided, and there is a copious discharge of fecal matter, both externally and into the peritoneal cavity, as is evinced, in the latter event, by the excruciating pain, the gastric oppression, and the collapsed condition of the sufferer. Here the most prompt and decisive measures must be resorted to, or the person will perish from peritoneal inflammation, with as much certainty as if his skull had been fractured and a portion of his brain had been let out. It will not do for the surgeon to fold his arms, and look upon the scene as an idle and disinterested spectator. Far otherwise; he has a duty to perform, and that duty consists in dilating the external wound, if it be not already sufficiently large, in hooking up the injured bowel, and in closing the solution of continuity with the requisite number of stitches, at the same time that the effused matter is carefully removed with tepid water and a soft sponge. All wiping must, of course, be carefully avoided, as this would add much to the risk of peritonitis.

"By the above procedure, which, under the circumstances pointed out, I should not hesitate to pursue, the patient is not placed in a worse condition than a female who has undergone the Cæsarean section, or a person whose abdomen has been ripped up in the first instance; recovery from both of which is not, as is well known, of unfrequent occurrence."[1]

It is a rule with all educated surgeons to do the work which they are called upon to perform in as complete and thorough a manner as possible, and nowhere is this precept of greater importance than in the treatment of wounds of the intestines. A case recently reported by Professor O. K. Roberts, of Louisville, Ky., will aid me in illustrating my meaning. A man was cut in the abdomen with a pocket-knife; the wound was three inches long; the bowel protruded, and was pierced at two points, one opening being of the size of a common lead-pencil, the other of a pea. The knife in its passage had stripped off the serous membrane over a space of one inch by one-quarter. There were two slits in the mesentery, each one inch in length; and the patient had lost much blood. The mural wound was closed by sutures which embraced only the skin and superficial fascia. None of the bleeding vessels had been secured, and active bleeding was still going on from three points in one of the wounds in the mesentery, the other being occupied by a clot. It was in this condition that the man was found by Dr. Roberts, shortly after his wounds had been dressed by another surgeon. Satisfied at a glance that the case had not been properly managed, Dr. Roberts reopened the mural wound, secured the bleeding vessels with carbolized catgut ligatures, stitched the openings in the gut more thoroughly, washed out the peritoneal cavity with hot carbolized water, and closed the abdominal wound with deep sutures, completing the dressing by inserting a drainage-

[1] Gross's Surgery, vol. ii. p. 613, Sixth Edition.

[1] An Experimental and Critical Inquiry into the Nature and Treatment of Wounds of the Intestines, p. 341, Louisville, 1843.

tube in the lower angle of the wound. Under this treatment with proper subsequent care the man made a rapid recovery. Had the dressing originally applied been allowed to remain, death would have been inevitable; either from hemorrhage, peritonitis, or peritonitis and septicæmia.[1] The case affords a happy exemplification of hasty, careless, slovenly surgery, on the one hand, and of thoughtful, wide-awake, scientific surgery on the other.

The therapeutics after all such lesions is sufficiently simple. The great point is to prevent peritonitis, or to combat it, if it takes place. The posture should be such as to relax thoroughly the abdominal muscles. The bowels should be locked up with opium to prevent peristaltic action, and nothing but iced water or pounded ice, aided, if there be much gastric distress, by a small allowance of dry champagne, should be permitted during the first three or four days. Oppression from gas should be relieved with injections of turpentine and asafœtida. Peritonitis should be met with leeching, followed by vesication with cantharidal collodion, and full doses of opium; venesection will be proper when the patient is young and robust. A laxative of castor oil, or of sulphate of magnesium, may be given at the end of five or six days, if there be marked suffering from tympanites. The urine should be drawn off during the first few days with the catheter.

I have, thus far, said nothing of gunshot wounds of the intestines. Such wounds are generally of a very serious nature, and are, therefore, liable to be followed by the worst consequences. In the first place, they are nearly always concealed wounds, from the fact that there is no prolapse of the bowel; secondly, such wounds are commonly multiple, as in one of my own cases, in which there were as many as eight perforations—two in the ileum, two in the jejunum, two in the duodenum, and two in the arch of the colon; thirdly, there is always more or less copious effusion of fecal matter; fourthly, great shock, to say nothing of hemorrhage, nearly always attends; and, lastly, most patients who survive the more immediate effects of such injuries are almost certain to succumb to peritonitis. The only rational treatment in such cases is to expose at once, or with the least possible delay, the peritoneal cavity, to stitch up, or excise, the wounded bowel, and, lastly, to clear away all extraneous matter. Excision of the tube is imperatively demanded when the wound is very large, severely contused, or very ragged. Nothing short of this would answer under such desperate circumstances; and even then no sensible surgeon would venture to pronounce a favorable prognosis.

It was my purpose, in connection with this paper, to offer some remarks on excision of the intestine in gangrene from strangulation in hernia; but it has already so far exceeded the limit originally assigned to it that I must confine myself to a few passing sentences.

The first operation that was ever performed for such an object occurred in the hands of Ramdohr, a German surgeon, who flourished in the early part of the last century. His patient was a woman, the subject of a strangulated femoral hernia, and, although fully two feet of her small intestine were removed, complete recovery ensued. This remarkable case remained for a long time a solitary illustration of the manner in which a man, inspired by genius and the gift of prevision, may project himself into the future far in advance of his plodding contemporaries. Towards the close of the last century, and the beginning of the present, operations of this kind became more frequent, chiefly through the labors and writings of Sir Benjamin Travers and Sir Astley Cooper, of London; Duverger, Boyer, and Lavielle, of France; and Schmidt and Dieffenbach, of Germany. In this country, the first case of the kind occurred in the practice of the late Dr. Charles Luzenberg, of New Orleans, in 1846. The case was one of strangulated inguinal hernia, in which that distinguished surgeon, on the basis of the recommendation contained in my monograph on wounds of the intestines, excised six inches of the ileum, and succeeded in curing his patient. Operations of this kind, dating from these humble and uncertain beginnings, now justly rank among the established resources of surgery. In an article published in THE MEDICAL NEWS for March 15, 1884, Prof. S. W. Gross refers to 67 cases of this kind, in the hands of different surgeons, nearly all European, of which 21 made complete recoveries, 2 escaped death with an artificial anus, and 44, or 65 per cent., perished. This remarkable mortality seems to have been due, not, as one might, *a priori*, have supposed, to peritonitis, but to the unsound condition of the bowel beyond the seat of the gangrene, a fact of great practical value, and one that should not be lost sight of in operations undertaken for this purpose.

[1] American Practitioner, January, 1884.

TREATMENT OF SUBCHRONIC DIARRHŒA BY THE USE OF UNCOOKED, FULLY RIPE, FRESH FRUIT.

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IT is well known that many sufferers in Southern Europe annually await the season of the vintage as an expected cure for various disorders of health. This expectation is doubtless based upon experience and observation of the masses of the people, and it is also supported by the opinions of many eminent physicians. Dr. Warren Stone, the distinguished surgeon of New Orleans, once said that one of the greatest blessings that could come to the people of our country would be the general cultivation and use of subacid fruits.

Without some special knowledge of the effects of these subacid fruits, and of the maladies in which they are of service, we are liable to use them when we ought to avoid them, and to avoid them when we ought to use them. As a contribution to such special knowledge, I present here a history of two cases of subchronic diarrhœa, from which I took the hint for a number of cases that I have since treated and

have had treated by the dietetic use of fully ripe, but uncooked, fresh apples or cling-stone peaches. I mention apples and cling-stone peaches, because they were the fruits successfully employed by me. Perhaps some other, or many other fruits, may answer, but the *soft*- or free-stone peach, when tried by me, acted upon the bowels as a laxative, and did not do for the treatment of diarrhœa.

CASE I.—A man of sedentary occupation in Dallas County, Alabama, aged twenty-nine years, had an attack of dysentery (epidemic), which went off very reluctantly after a number of slight relapses, and left the man emaciated, debilitated, and with a digestion so impaired and bowels so irritable that various diets to which he resorted all failed to suit him, and all alike seemed to excite frequent, painful, but not copious or bloody, evacuations. This condition persisted for some weeks, when, about the early half of July, he went with a party of friends to Conecuh County, under the hope that a different water, a different air, and a difference of surroundings with rest and freedom from the cares and exertions of business, might be of value to him.

The first week passed in the new locality made no change in the symptoms, and the patient resolved to take nothing but tea for breakfast and supper and a saucer of soft peaches for dinner. Under this treatment the bowels became, at once, more active, and the actions more copious. Supper was then entirely abstained from, and the soft peaches with a little clarified sugar added were the only thing taken for dinner. The case made no improvement, and the patient, abstaining almost entirely from both food and water for a day or two, walked about in the groves surrounding the beautiful country residence where he was stopping, in very great discouragement and thoughtful as to what more he could do for himself. In one of these walks he climbed a fence to walk through an orchard adjoining and found many acres in peach trees, the trees being weighed down and the ground beneath them strewn with peaches, many of which were fully ripe, and many also passing into fermentation and decay. As the weather was dry and the sun hot, many of the cling-stone peaches, both on the trees and on the ground, had become extremely ripe and sweet, somewhat wilted in feel, and on one side discolored and toughened as if somewhat suncooked. These, beside having no sourness at all, but only a pleasant subacidity, had a peculiarly mild and mature sweetness, which was grateful but not cloying, and had acquired a flavor suggestive of brandy. The patient, not dreaming of benefit, but under the temptation of appetite and the recklessness of despondency, selected one or two of the most mellow of the cling stone peaches, and after thoroughly masticating them, swallowed the juice and pulp. He experienced no harm from the venture, and, thinking the matter over, determined to take nothing at all at the table, and to confine himself for a while to a cautious use of these almost dry-ripe cling-stone peaches. This he did, to the exclusion even of water itself. His bowels gave him no more trouble, and after about two weeks' restriction to the cling-stone peaches alone, he gradually returned to other articles of food, and, without a single dose of other curative, recovered his flesh and strength with all the other comforts of health.

CASE II.—In 1857, in Camden, Alabama, a man about thirty-five years of age had malarial trouble, for which he took sulphate of quinine very freely, and with satisfactory results, so far as the objects for which he took it were concerned, but the quinine seemed to irritate his bowels—at least these acted as though by some purgative every time he resorted to the free use of quinine. The result was that from about an hour before dawn until about ten o'clock A.M., every day, he would have from four to ten painful evacuations, not copious, or serous, or very exhausting, but very annoying on account of the great pain. This resided in the descending colon and rectum, paramountly in the sigmoid flexures and vicinity. The trouble resisted opiates, opiates with salines combined, bismuth, vegetable astringents, and such other modes of treatment as are most frequently productive of good in such cases. The most stringent rules of diet were most self-denyingly submitted to, but days ran into weeks, and weeks were running towards months, with no satisfactory improvement of condition, when one day the patient, hungering and thirsting and low-spirited, passed along the sidewalk by a window that was piled up with blushing western apples, whose ripe fragrance perfumed the neighboring air for some distance around. He resisted the temptation and passed on, under the impression that the apples would be bad for his case. Day after day he suffered the same way and passed the same window and successfully resisted the same temptation. At length, finding no change for the better, from regimen or medicine, either or both, and being on a rigid fast and in a half-desperate mood, he halted at the store, procured three of the finest and ripest of the apples, and then went on. Two of these apples he put into his pocket to await the effect of the other, of which he scraped a part with his knife and swallowed the scrapings, both juice and pulp. This partially allayed his hunger and partially quenched his thirst, and as his bowels suffered no harm, he took the remainder of the first apple as his exclusive food and drink for the rest of that day. The next morning brought no pain with it, and no action occurred from the bowels. The two remaining apples were used in the same way as the first, and constituted the sole food and drink of the forenoon of the following day. A half-dozen apples were taken as the food and drink of the third day of the treatment, and for a week or two nothing at all but mellow, choice apples, thoroughly masticated, were taken. There was no more pain or looseness of the bowels, and the convalescence was uninterrupted and complete.

These two cases, thus given at length, render it unnecessary to furnish details or even abstracts of many other cases of subchronic diarrhœa similarly and successfully treated; and, regarding them as fairly typical, I urge the importance of thoroughly ripe subacid fruits, not only as a remedy for similar troubles among the residents of tropical and subtropical regions, but also as an important factor

in diet in health, conducive to the prevention of such maladies by the correction of any scorbutic tendency in blood or tissue which may underlie these and other like maladies.

MEDICAL PROGRESS.

THE ETIOLOGY OF JEQUIRITY OPHTHALMIA.—As is well known, says E. KLEIN, of London, Sattler and De Wecker have stated that infusion of jequirity causes ophthalmia, by the presence of a bacillus and its spores. He has recently made observations on this subject which lead him to contradict this statement. The jequirity seed were deprived of the perisperm, powdered, and then an infusion placed in a retort sterilized by heat, containing boiled distilled water, and sealed with sterilized cotton. This was a one-half per cent. solution, as used by Sattler. The infusion was made with lukewarm water. After half an hour the infusion was filtered into a sterilized flask through a clean, heated filter. From this filtrate a small quantity was removed by means of a capillary tube, and four flasks, containing sterilized peptone-solution, were inoculated. By means of the same capillary tube the conjunctivæ of four rabbits were inoculated. The inoculated flasks were placed in ovens and kept at a temperature of 35° C. After twenty-four hours, the rabbits showed the typical intense ophthalmia, while the flasks were perfectly clear, there being no trace of cloudiness; furthermore, the inoculation of new cultures and microscopic examination showed no microorganisms of any kind.

A second and third series of experiments gave the same results, and Klein says that he is forced to the conclusions that Sattler's statement that the jequirity infusion owes its action to the presence of a bacillus is untenable; that Sattler must have used much stronger infusions than he; that he used infusions which had been kept for several days; and that he inoculated the eyes with bacilli when these old infusions were used.—*Centralbl. f. d. med. Wissensch.*, February 23, and March 15, 1884.

NAPHTHALIN IN THE TREATMENT OF WOUNDS.—In the *Vratch*, 1882, No. 39, and 1883, No. 2, DR. P. T. DIAKONOFF, of Orel Zemsky Hospital, publishes eighty cases of wounds, abscess-cavities, and ulcers, in which he used naphthalin as an antiseptic, in the form of medicated wool, gauze, or jute, or crystals, powder, ointment, or rods made of equal parts of the drug and gelatine or cacao butter. The results obtained by the author are decidedly favorable to the new antiseptic. The advantages claimed by him for naphthalin are its cheapness, harmlessness, and the ease of application. Of its drawbacks he mentions only two: 1. Naphthalin dressing in some cases gives rise to severe pain. 2. It does not prevent the appearance of erysipelas. The author never saw any formation of crusts, or occurrence of eczema, and other signs of local irritation, or hemorrhage, after the use of naphthalin, of which Drs. Hoeftmann (*Centralbl. für Chirurgie*, 1882, No. 72) and Hager (*Ibid.*, No. 50) complain.

DR. V. LINDENBAUM, of Jaroslavl (*Vratch*, 1883, No. 17), has used naphthalin in nearly fifty cases of frostbite, the toes and fingers being mostly the parts affected. In many cases extensive, freely suppurating, sloughing ulcers were present. The method after which the cases were treated was simple. First, the affected parts were washed with a carbolic solution (3 to 5 per cent.); then they were covered with a thin layer of pure crystallized naphthalin (*naphthalinum albissimum*), over which a large piece of soft carbolic gauze was laid; then a few cakes of resinized tow followed; lastly, a thin sheet of waxed paper was placed, and the whole fixed and compressed by a starched gauze bandage, or, for the sake of cheapness, by narrow strips of adhesive plaster. The dressing was changed, as a rule, every seven or ten days, and only in cases of profuse suppuration every four days. Healing generally progressed very rapidly. The author never saw any untoward symptoms, except slight pricking pain during the first two or three hours after powdering, and slight hemorrhages from granulations. Wounds ran their course without any rise of temperature.—*London Medical Record*, March, 1884.

SIMULTANEOUS LIGATURE OF THE SUBCLAVIAN AND COMMON CAROTID ARTERIES FOR INNOMINATE ANEURISM; RECOVERY.—DR. JULIUS ROSENSTERN reports the case of a woman, æt. 42 years, who, about two and a half years ago, began to experience pains in the upper part of the chest, and extending into both arms. In July, 1883, a pulsating swelling was noticed on the right side of her neck, and has since increased. The symptoms were those of aneurism of the innominate artery.

On November 26th the right common carotid and subclavian arteries were ligated, two ligatures being placed upon each. The wounds were irrigated with a four per cent. solution of carbolic acid, filled with iodoform gauze, then sewed up with the exception of a small opening for the passage of the ligatures and an iodoformized drainage-tube. The whole was covered with an iodoform wadding bandage, the head drawn over to the right side with triangular cloths, and the right arm firmly bandaged to the thorax. The bed was elevated at the foot to facilitate drainage and guard against a congestive abscess in the mediastinum.

The first bandage was changed on the seventh day after the operation, the iodoform gauze removed, the wounds iodoformized and compressed with iodoform wadding bandage. The sutures were removed on the fourteenth day. The edges had united by first intention, with the exception of the space occupied by the drainage-tubes, which were also taken out at the same time. The temperature only rose once to 102°. The pulse was at first 100, and very strong, but gradually came down to 80. One ligature of the carotid came away on December 24th, the other eight days later. The ligatures of the subclavian came away toward the end of February. The right radial pulse reappeared on January 2d, but is still very much weaker than on the other side. The pulse in the right temporal artery cannot yet be felt.

On the 1st of January she left the bed for the first time, and went home on the 8th. Since the day after the operation the pains and difficulty of breathing have not returned. The tumor, though considerably diminished, has not entirely disappeared.—*Pacific Med. and Surg. Journ.*, March, 1884.

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THE MODERN CURE OF HYDROCELE.

In the *Wiener medizinische Wochenschrift*, Nos. 1, 2, 3, and 4, 1884, may be found a contribution to "The Final Results of Radical Operations for Hydrocele," from the pen of DR. OTTO WEISS, which is mainly interesting from the fact that it gives the experience of Billroth with the injection of iodine in 166 cases, in 5 of which suppuration, demanding free incision, ensued, and in 6 the affection was known to have recurred. In addition to this paper, JULLIARD, of Geneva, describes his modified operation of antiseptic incision of the sac in the *Revue de Chirurgie*, No. 2, 1884. From these contributions, as well as from information derived from public and private sources in our possession, we have gleaned some facts which will doubtless prove of interest to our readers, as they throw new light upon the relative merits and disadvantages of the most popular methods of treating hydrocele.

Of the curative measures, the one that is most frequently resorted to is the injection of tincture of iodine, either pure or diluted with an equal weight of water, or in the form of Lugol's solution. Unless we greatly mistake, the profession is inclined to regard this operation as being absolutely safe, and certain in its results, despite the fact that there are not a few isolated examples of death following its employment, to say nothing of the occurrence of shock, severe pain, undue inflammation, and gangrene of the scrotum, even in the hands of experienced surgeons. That the failures have been underestimated, and that some of its risks are not sufficiently well appreciated, becomes apparent from an analysis of 523 cases which we have collated from the practice of Billroth, Esmarch, Kocher, Volkmann, Krabbel, Jacobson, Osborn, and Abbe. Of the entire number, the disease recurred in 44, or 8.4 per cent., while acute suppuration supervened in 5, or 0.95 per cent.—2 after the use of equal parts of the agent and water, and 3 after the injection of the compound tincture. It may be remarked that the failures are as common after the injection of one solution as another, and that about three weeks are required to effect a cure.

Within the past decade, the treatment of hydrocele by antiseptic incision has been much practised, particularly in Germany. In this operation, to which the name of Volkmann is attached, the scrotal tissues are freely divided, under the spray, down to the vaginal tunic; bleeding vessels are secured; the sac is opened by an incision of similar length, and syringed out with a three per cent. solution of carbolic acid, when the edges of the serous membrane and external wound are united with catgut sutures, a short drainage-tube being inserted at the most dependent portion of the cut, and the parts firmly occluded and compressed by carbolized gauze and bandages.

The advocates of this method declare that it is absolutely safe, certain, and rarely attended with surgical fever; but their positive statements are not sustained by an examination of 254 cases, recorded by Volkmann, Kuester, Weir, Englisch, Albert, Lister, and Jacobson, Of this number, not only did the fluid reaccumulate in 3, or 1.18 per cent., but 2 patients, or 0.79 per cent., died, respectively, of septicæmia and pyæmia. In addition to these evils, carbolic acid erythema, abscess in the connective tissue, and partial sloughing of the edges of the wound have not infrequently been observed, and orchitis has now and then been met with. Although a cure is secured in about ten days, the parts remain tender, hard, and swollen for about three weeks in the majority of cases, so that the subject really does not move about with comfort for one month. It should be noted that the advocates of the operation have referred the tenderness and tumefaction to the plastic infiltration of the vaginal tunic, through which the obliteration of the cavity is secured, while its opponents have ascribed it to orchitis and epididymitis. That neither of these views is correct, is shown by a case recorded by Kraske, in the *Centralblatt für Chirurgie*, No. 47, 1881, in which death ensued on the tenth day from intercurrent pneumonia. There was no lesion whatever of the organs referred to; but the swelling was due to a clot of blood undergoing connective-tissue substitution, or so-called organization, at its periphery. The result of this examination led, in the succeeding thirty-one cases in Volkmann's clinic, to the careful securing of all vessels, so that the tumefaction was reduced to a minimum in the ma-

jority and was entirely absent in a few. In a second case of death from internal strangulation of the intestine on the tenth day, Julliard was enabled to confirm the statement of Kraske.

The operation of Volkmann has been variously modified, with the view to dispense with a large incision and shorten the duration of the treatment. Thus, Volkmann himself, Reyher, Trendelenburg, and Weir made a small puncture or incision, washed out the cavity with a carbolic acid solution, and inserted a small drainage-tube. The disadvantage of this procedure is that the small opening may close after the removal of the drain, before firm adhesions have taken place, through which there will be danger of recurrence, as happened in 1 of the 19 cases in which it has been resorted to. Jacobson, in 3 successful cases, opened the sac by a cut about two inches long, and excited the formation of granulations by inserting a narrow strip of gauze soaked in carbolized oil. Finally, Julliard incises the sac freely; removes with the scissors or spoon any pathological products which may exist on the vaginal tunic, the testicle, or the epididymis; ties all bleeding vessels; resects the vaginal tunic, so as to leave enough to cover the testicle and the cord; unites the edges of the tunic with catgut sutures; inserts a rubber drainage-tube in the lowermost portion of the external wound, and closes the latter with catgut. Of his 54 cases, there was recurrence in 1, which was probably due to the irritation produced by the decalcified bone drain, which was found, at the end of fifteen months, to have undergone no change whatever, and 1 patient died of internal strangulation in ten days. Hence, of 330 examples of antiseptic incision of the sac, there were 2 deaths, a mortality of 0.6 per cent., and 5 recurrences, or a percentage of 1.5. These disadvantages and risks are offset by the short time required to effect a cure, although the parts remain swollen and tender for about three weeks.

Antiseptic incision has materially increased our knowledge of the changes which occur in the sac and its contained organs. Thus, in the 54 cases recorded by Julliard, and in 69 reported by Genzmer, from Volkmann's clinic, in the *Sammlung klinischer Vorträge*, No. 135, or in a total of 123, cysts were found on the vaginal tunic, the testicle, or the epididymis in 43, the testicle and epididymis were enlarged in 23, the vaginal tunic was thickened in 54, false membranes were present in 26, and free or attached foreign bodies were met with in 3. These abnormal products are regarded by some teachers as being the cause of recurrence after the treatment by injection; but we are of the opinion that they indicate merely that disturbances in the secretory apparatus of the male genital organs occasion hydrocele as well as the lesion referred to.

For the past three years, Dr. Levis has resorted to the injection of from thirty to sixty grains of the deliquesced crystals of carbolic acid into the sac, but with what results we are not informed, save in the general statement that the treatment has been almost uniformly successful. The method is certainly painless, is not productive of shock, involves no trouble, and is speedily carried out. The patient need not keep his bed longer than a few days, but the swelling does not disappear, on an average, before the expiration of one month. Of 82 cases, in the hands of Weir and Abbe, suppuration occurred in 3, in one of which the sac sloughed; but the amount of the agent used—from two to three drachms—was too large. In a fourth case, the sac rapidly filled with bloody serum, which had to be let out. These drawbacks may be met with even when a small quantity of the remedy is employed. Thus, in two cases under our own care, the injection of one drachm was followed by a large effusion of blood into the sac, an accident which is doubtless due to the separation of the endothelium and the rupture of the underlying vessels of the vascular connective tissue. Suppuration ensued in a case recently treated with twelve minims by Abbe, and in one, now in the Jefferson Medical College Hospital, from the injection of half a drachm. No death has as yet been recorded; nor has recurrence or carbolic acid absorption been observed.

An analysis of the facts contained in the preceding paragraphs warrants the conclusion that antiseptic incision of the sac is too severe for ordinary cases, and that it should be reserved for those in which the vaginal tunic is much thickened, and for examples of recurrence after the employment of simpler methods. Although the injection of from thirty to sixty grains of liquefied carbolic acid, as a curative measure, has not as yet been sufficiently tested, we think that we are justified in predicting that it will prove to be the simplest, safest, and least inconvenient of all the measures heretofore employed for the cure of the very common affection under consideration.

THE STAINING OF KOCH'S BACILLI.

So much has been written and printed since Koch's original publication, upon the treatment of tubercle-bacilli with a view to their better and easier demonstration, that a systematic article by FRAENKEL, published in full in the *Berliner klin. Wochenschrift* for March 31, will be welcomed by physicians, especially as the methods are intended to be employed in the office rather than in laboratories.

In general, it may be said of the bacillus tuberculosis that it imbibes only certain aniline coloring matters; that a certain period of exposure is necessary; and that it must be treated by certain additional fluids to secure the most distinct demonstrations.

After a comparative trial of twenty aniline colors, Fränkel concludes, with other investigators, that the best are, undoubtedly, methyl-violet and fuchsin. Both of these are hydrochloric acid combinations, and both stain animal fibres more easily than vegetable. As to the time required for staining, ten minutes are necessary at the temperature of the room, although a much shorter time suffices in the warm box, while Rindfleisch has also shown that by warming the fluid the staining may be made instantaneously.

With the added fluids, Fränkel found the aniline water, as first suggested by Ehrlich, to give the best results, although equally good results were obtained with toludin water, an analogous substance which is always found to accompany the commercial aniline as an impurity. A durable fluid is composed of 93 c.c. of water, 3 c.c. of aniline oil, and 6 c.c. of alcohol. In this aniline water the coloring matters may be dissolved, but it is better to have on hand alcoholic solutions of fuchsin and methyl-violet, and before using to add, by means of a dropper, as Ehrlich originally suggested, as much of the solution of coloring matter as will produce a decided opalescence in the fluid. Five cubic centimetres of aniline water are heated to boiling in a test-tube, poured into a watch-glass, and the concentrated solution of coloring matter added. Upon this the covering-glass, on which the sputum is smeared, and dried by passing it a few times over the flame of an alcohol lamp, is floated for from two to five minutes.

In order to demonstrate the bacillus more distinctly, acids, alcohol, and watery solutions of other aniline colors are used, either to decolorize the other elements of the sputum, cells, nuclei, other fungi, or foreign substances, or so to stain them by these colors as to put them in contrast with the stained bacilli. For this purpose Ehrlich uses nitric acid diluted three times; Petri, glacial acetic acid; Rindfleisch, feebly acidulated alcohol; and Koch, in the beginning, vesuvin-solution.

Fränkel regards it as especially important to re-stain the decolorized preparation, thereby eliminating all possibility of mistake. For this purpose he has recently used a mixture of 50 parts of alcohol, 30 of water, and 20 of nitric acid, which is saturated with ethyline-blue and then filtered. Into some of this fluid the preparation is carried directly from the first color solution, and in this way the decolorization and second staining are at once accomplished, an immersion of one minute sufficing. The sputum on the cover-glass is then washed in water or in 50 per cent. of alcohol acidulated with one per cent. of acetic acid, and well dried by first compressing between filtering paper, and then quickly passing through a flame. In this way, says Fränkel, a preparation can be completely made and doubly stained in four minutes.

Baumgarten's method of demonstrating the bacillus unstained is less satisfactory. By Gibbes's method of staining the bacilli red and the background blue, by a single fluid, Fränkel thinks fewer bacilli are brought out than by the one detailed.

As to the use of an immersion system and Abbe's illuminator, Fränkel says much time is saved by them, but that with a good Hartnack No. 7, or any corresponding power, and ordinary illumination, the bacilli are easily recognized.

BATTEY'S OPERATION.

THIS operation was recently discussed in the Société de Chirurgie of Paris. POZZI narrated the case of a patient who had a tumor of the left ovary as large as an adult head, and who was bed-ridden for five years. She had left hemianæsthesia and hemiparesis; the left eye was amaurotic, and she had erotic nervous attacks each night. Removal of the tumor effected a perfect cure. In the discussion of the subject, TERRIER took the ground that Battey's operation was indicated in cases of obstinate hysteria if the ovaries were painful, at the same time mentioning that very grave hysteria had developed in one case upon whom he had performed ovariotomy, the subject having previously been quite free from the disorder. GILLETTE, on the other hand, thought Battey's operation a bad one, and not founded upon reason. Nevertheless, the general tone of the discussion was favorable to the operation—a just compliment thus paid our distinguished countryman by those who make no haste to discover merit on this side of the ocean, or, indeed, outside of France.

EXTIRPATION OF THE LUNG.

AMONG the novel experiments recently tried in Italy, the extirpation of the whole, or a part, of the lung seems the most remarkable. Fifty-seven animals—sheep, dogs, cats, and others were the subjects—had an entire lung extirpated, and thirty-five recovered. In twenty-three cases the right lung was removed, and twelve recovered; the left lung was taken away in thirty-four, and there were eighteen recoveries. There were three cases of removal of the upper part of a lung, and one each of removal of the middle and of the lower lobe; all recovered. It is very doubtful if these experiments will ever be imitated, on an extended scale, in human beings. Professor KRÖNLEIN, of Zürich, however, in a case of recurring round-celled sarcoma of the sixth rib, recorded in the *Berliner klinische Wochens.*, of March 3, 1884, not only removed a large portion of the wall of the thorax, including the costal pleura, but also resected a portion of the lung, which was the seat of a secondary sarcomatous mass. The insignificant bleeding from the lung stopped after bringing the edges of the wound together with catgut sutures. In one month the patient was discharged cured.

SOCIETY PROCEEDINGS.

THE MEDICAL ASSOCIATION OF GEORGIA.

Thirty-fifth Annual Session, held at Macon, April 16, 17, and 18, 1884.

(Specially reported for THE MEDICAL NEWS.)

THE thirty-fifth annual session of the Medical Association of Georgia convened in the city of Macon April 16, and continued in session three days.

FIRST DAY.

The Association was called to order by the retiring PRESIDENT, DR. K. P. MOORE, of Macon. After prayer by Rev. A. J. Battle, D.D., Dr. Wm. F. Holt, of Macon, in a neat address, welcomed the Association to the city. This address was responded to by Dr. L. B. Alexander, of Forsyth. The PRESIDENT-ELECT, DR. A. W. CALHOUN, of Atlanta, was then introduced, and delivered

THE ANNUAL ADDRESS.

He said: My subject—*School Hygiene in Relation to its Influence upon the Vision of Children*, or school sanitation—does not express the full scope of this discourse, but is a faint outline of what I shall have to say to you in the time allotted to me.

The medical aspects of life are deservedly attracting more and more the attention of doctors in every land where education and civilization have made much progress. The researches of one investigator developed the fact that out of more than 2300 infants examined by him, only 122 possessed abnormal peculiarities of any kind, and from this fact drew the conclusion that, when they start to school, children, as a rule, are physically sound. That deformities of one organ or another, simple or serious, do exist amongst school-children, admits of no argument, and many of these may be reasonably attributed to the influences surrounding a child during its life in the school-room. The various parts of the organism of youth are easily disarranged, and if the cause operates continuously, the disarrangement is liable to become permanent.

Before the child even sees the inside of a school-room, he learns many useful things—often more than he does in the next succeeding five years, and yet this learning does not injure his eyes. It is a fact that children, at the time of entering school, are free from that common affection, near-sightedness, but almost immediately thereafter the disease begins to show itself. This is conclusive evidence that the fault, to a great degree, at least, lies in the school.

For many years, deterioration of the eyes among pupils in public and private schools has been a topic of complaint and investigation both in this country and the older nations of the world. This impairment of sight, this deterioration of the eye, is principally the immediate results of myopia, or near-sightedness, which, in its turn, is caused by defective modes of education and their hurtful surroundings.

After entering minutely into myopia and its causes, Dr. Calhoun said in reference to its treatment: Prevention is the sole resource at our command; restoration is impossible; and in order that preventive measures may be seasonably adopted, it is first necessary that the profession and the public should become alive to the fact that in a large number of cases myopia is one of the gravest affections of the eye, capable of limitation by constant care during childhood and youth; but, if not thus limited, likely to be a source of future disability and misery, and to be handed down as an onerous inheritance to children. After referring to the fact that the disease myopia was unknown in the negro in the South in *ante-bellum* days, and showing from statistics that education had produced the disease in a great number of them recently, he closed with the following sound words of advice: Fewer hours of study, and more rational methods of teaching; less cramming of mere memory, and more healthy development of the intellect, will make brighter, healthier, and more intelligent students, who will develop into stronger, hardier, and more energetic men and women. For such as these the practical affairs of life offer many and varied fields of usefulness, while for the sallow-faced, narrow-chested, weak-eyed bookworm there is no room in a busy world.

DR. JAMES P. LOGAN, of Atlanta, Chairman of the

COMMITTEE ON AN INEBRIATE ASYLUM,

reported that every effort had been made to have the legislature pass an act providing funds for the establishment of such an institution, but without avail. He said he was satisfied that it was impossible to induce them to do anything in the matter, and asked that the committee be discharged. The request was granted.

DR. H. V. M. MILLER, Chairman of the

COMMITTEE ON EXPERT TESTIMONY,

said it was difficult to get the legislature to understand that a law providing proper compensation for medical experts was not "class legislation." He had proposed and had presented to that body a bill, but could get no one to advocate it. He suggested that the committee be continued, and that a bill be proposed providing for the payment of all experts: not only medical experts, but experts of every class called into court to testify, and that they be compensated as the judge trying the cause might determine. On motion, the committee was continued.

DR. MILLER, Chairman of the

COMMITTEE ON ANATOMICAL MATERIAL,

reported that a bill had been prepared and presented to the legislature and passed both houses, but was vetoed by the Governor after the adjournment of the legislature. The Governor had never published any reasons for this veto, but he had been informed that it was done on account of the short time allowed in which strangers dying in the State should be held before being delivered to the medical colleges. The bill provided for twenty-four hours only. He further stated that he thought with that objectionable feature of the bill removed, it might yet become a law. The committee was continued, and instructed to use every effort to obtain a law providing dissecting material for the colleges.

DR. EUGENE FOSTER, of Augusta, Chairman of

THE COMMITTEE ON NECROLOGY,

presented touching and beautiful memorial tributes on the lives and characters of Drs. E. H. W. Hunter, of

Louisville, Sterling Eve, of Augusta, J. M. Carlton, of Athens, Alexander Means, of Oxford, and L. D. Ford, of Augusta. The tribute to Dr. Ford was specially feeling and earnest, and was received with the most profound attention and reverence by the Association. Dr. Ford was the first President of the Association, he having been elected in 1849, at the organization.

THE COMMITTEE ON PRIZE ESSAYS

in their report stated that a number of essays had been submitted, but none was found worthy of a prize. The committee was continued.

Reports of sections from the several congressional districts were then secured.

SECOND DAY.

The Association was called to order by the President, Dr. A. W. Calhoun, at 10 o'clock A.M.

REPORTS.

The annual reports of the Treasurer and Secretary were read. They showed the finances of the Association to be in a good condition.

Under the call for voluntary contributions, a large number of papers were read by title, to be subsequently called up and read at the pleasure of the Association.

Only a few of these papers were read; they were all referred to the Committee on Publication, and will, no doubt, appear in the *Transactions* of the Association.

THIRD DAY.

The Association was called to order at 10 o'clock A.M. The entire morning session was taken up with the reading of voluntary contributions reported by title the previous day. Two of these papers deserve special notice, the one on *Consumption* by Dr. Miller, and the one on *Explanation of the Pathology and Therapeutics of the Nerve-centres*, by Dr. Gaston.

THE PRESIDENT appointed Dr. Jas. B. Baird, of Atlanta, *Orator* for the next year. He also announced the following

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION:

Drs. Eugene Foster, H. F. Campbell, A. G. Whitehead, Jas. P. Logan, G. W. Mulligan, H. McHatton, B. R. Daston, De S. Ford, W. H. Doughty, Sr., W. F. Westmoreland, V. H. Taliaferro, W. O'Daniel, K. P. Moore, A. J. Logan, C. D. Smith, T. O. Powell, R. J. Nunn, T. J. Charlton, Robt. Battey, W. B. Wells, John Gerdine, E. Fitzgerald, M. G. Hatch, W. P. Nicolson, P. L. Hilsman, J. C. Solomon, Jas. A. Gray, S. B. Hawkins, G. G. Crawford, T. M. McIntosh, E. C. Goodrich, T. R. Wright, C. H. Hall, and A. W. Calhoun.

On motion, the President's name was added.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Eugene Foster, M.D., of Augusta.

Vice-Presidents.—Drs. J. B. Roberts, of Sandersville; and W. D. Bozzell, of Atlanta.

Secretary.—Dr. James A. Gray, of Atlanta.

Treasurer.—Dr. E. C. Goodrich, of Augusta.

The next meeting will be held in Savannah, on the third Wednesday in April, 1885.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

Eighty-sixth Annual Meeting, held in Baltimore, April 22, 23, 24, and 25, 1884.

(Specially reported for THE MEDICAL NEWS.)

THURSDAY, APRIL 24—THIRD DAY.

DR. J. W. CHAMBERS read a report of

FOUR CASES OF ABSCESS OF THE BRAIN.

In the first two cases, the abscesses were caused by external injuries; the patients died forty-six and thirty-one days, respectively, after the accidents. These cases, and especially the second, were interesting from the fact that in neither of them was there any evidence at the autopsy of depression or fissuring in the skulls—apparently the lesion was the result of a necrotic periostitis following contusion of the bone at the point against which the missile impinged. Dr. Chambers said that he had searched all the literature accessible to him without finding a similar injury to the bone recorded. It seemed to him impossible that a contusion (rupture of capillaries, and, possibly, laceration of brain substance) could be produced in the white matter of the brain without a similar injury to the cortical substance, but he suggested that probably the contusion in the cortical substance might be entirely recovered from, whilst in the white substance the comparative paucity of vascular distribution renders the repair of such an injury much more difficult. The two remaining cases were not caused by any external injury; one was due to embolism, and the other was probably idiopathic.

DR. JOSEPH T. SMITH then read a paper entitled

THE PAST YEAR IN PATHOLOGY,

in which he entered very fully into the recent developments, taking up specially the germ theory. He dwelt largely upon the results of the work of the French and of the German Cholera Commissions—results which, though by no means all that is needed on the subject, have gone far toward the desired goal. Dr. Smith discussed the bacillus of tuberculosis, and entered somewhat into detail on the subject of the various controversies now being carried on on the subject, quoting from authorities on the opposing sides. He then gave the results of the investigations carried on at the Brompton Hospital, London. He concluded his remarks in this connection as follows: "It is more than probable, then, that the bacillus will be shown to be a veritable microörganism; that it will be of value as a diagnostic, and possibly as a prognostic agent; but, while it may be active in the production of phthisis, something more is required, and that not it alone is responsible for phthisis" (referring to individual susceptibility).

DR. FRANK DONALDSON then read a paper on

THE INFLUENCE OF LUNG RETRACTILITY IN PLEURISY AND PNEUMOTHORAX.

He said that it is strange how observers have neglected to apply the knowledge gained by physiological research of the retractile force of the lungs to the investigation of the pathological conditions of the chest. This neglect has had a very considerable effect in retarding our progress in the thorough study of the diseases of the

chest. He proceeded in detail to consider the various contributions towards a correct estimate of the subject treated of in his paper by Marcy, Hutchinson, Hyde, Salter, Powell, and Le Gros Clarke, who had all, in some degree, prepared the way for the work of Dr. W. H. Stone, of London, who in 1877 reported his experiments upon sheep, from which he concluded that the retractile power of the lung was equal to four or five inches of water. He also showed that even when the effusion was considerable in the pleural cavity, the lung still possessed contractile power enough to support two inches of water, so that to evacuate the fluid it was necessary to use external suction sufficient to overcome this lung traction. Dr. Garland, of Boston, a few months after this, gave a great impetus to the study of the dynamics of the chest in his work on *Pneumo-dynamics*. Before 1843 it was thought almost universally that the effused pleuritic fluid obeyed the law of gravity as in open vessels or in a vacuum, and hence it was assumed that the fluid maintained a horizontal level. The distinction between impaired resonance (dulness) and flatness had not yet been recognized. M. Damoissan called attention to the fact that the line of dulness when the patient is erect does not assume a horizontal line, but one more or less following the curve of a parabola.

In 1874–1876 Dr. Calvin Ellis described the upper line of the effused fluid as beginning, with medium effusion, relatively low down in the back, passing outward from the vertebral column and turning upward and proceeding obliquely across the back to the axillary region, where it reaches the highest point. Thence it advances in a straight line, but with slight descent, to the sternum. This is the Ellis or S curve. When the fluid occupies most of the chest up to the second rib, the retractile power of the lung is lost, and the fluid will approach the horizontal line. This S curve Dr. Donaldson and others have confirmed by their own observation.

Dr. Donaldson then considered the influence of the retractile lung power in the production of displacements of the adjacent organs, heart, etc., displacement of lung diaphragm and intercostal spaces of liver, spleen, and stomach, and in the production of pneumothorax.

He concludes that lung retractility is not only a powerful physiological force in respiration, but that it also produces modifications of a decided character in diseases of the chest. The practical value of these facts consists in the aid they give us in the differential diagnosis of pleurisy and pneumothorax, the assistance they afford us in measuring the quantity of fluid in the pleural cavity, and the indications they furnish us as to the advisability of resorting to thoracentesis.

PROF. G. STANLEY HALL, of the Johns Hopkins University, then delivered an address on

LOCALIZATION AND RECENT PHYSIOLOGY OF THE BRAIN.

Among the results made probable by recent methods of study are the continuity of the pyramidal fibres of the cord to the cortex through the inner capsule, without the interruption formerly supposed, in the cells of the large basal ganglia. These tracts decussate only in part, and are the tracts, at least, for the arms of volitional motor innervation. The cerebellum, whatever other function it may have, appears to be very largely a commissure between the hemispheres, particularly between the "latent" frontal and occipital regions—the projection system of the "psychic zones" lying between these. Its very intimate connection with the red nucleus of the olivary bodies, and a lateral column of spinal fibres, is now very probable. These and other results were illustrated by maps and by Aeby's brain phantom, made of colored cork and wire.

DR. A. G. HOEN, then described a simple and inexpensive method of

PHOTOGRAPHING WITH THE MICROSCOPE.

He said that tissues, as ordinarily cut and stained with carmine, are admirably adapted for photography with the low and medium powers. By placing the sensitive plate at a distance of two, three, or four feet from the objective, and using the eye-piece in conjunction with the objective, excellent results are obtained. As a means of recording microscopic observation, nothing is so absolutely true as a good photomicrograph; it is especially suited for perishable preparations, such as scrapings from tumors, etc.

The various manipulations of this process, known as the wet-plate process, were then shown as far as it was possible to do so. The character of the negatives exhibited, as also that of the prints from these, proved conclusively that good work could be done without the use of expensive apparatus. In this case the illumination of the object was effected by an ordinary mirror mounted on a movable pivot and fixed to a window-sill having a southern outlook. The use of the blue glass cell so strenuously insisted on by most authors, was found unnecessary; a ground glass, however, placed on the under side of the aperture in the stage of the microscope was indispensable, both to insure an even illumination and to render the rays of light parallel. The preparation of the plates (collodionizing and sensitizing) is so simple that anyone who has once seen the process could easily follow it. After a proper field has been secured ocularly, the instrument is placed in connection with the camera. The exposure is now made by withdrawing the dark slide from the plateholder, and according to the lenses used a longer or shorter time is given. The development, conducted in the dark-room, is secured by a solution of iron and acetic acid. The process commends itself by its extreme cheapness, $25.00 being sufficient to supply the camera, bath, dishes, etc., with all the necessary chemicals used. Another great advantage which the wet plate possesses over the dry is that a few seconds more or less underexposure does not affect it harmfully, whereas in the dry plate either one way or the other is sure to be ruinous unless in the hands of a very skilful developer.

DR. SAMUEL THEOBALD read a paper on

PREVENTABLE BLINDNESS.

He said that his experience in the treatment of diseases of the eye had led him to the conclusion that in fully fifty per cent. of the cases, blindness ensues from preventable causes. Under these circumstances no apology should be required for introducing this subject. In many instances this is due to the ignorance or criminal carelessness of parents and others; but too frequently the fault lies with the medical attendant, whose superficial knowledge of the diseases of the eye is the cause of the untoward result. *Purulent conjunctivitis of infants* probably causes more blindness than any other eye

disease, but, if judiciously treated from the beginning, it can almost always be brought to a favorable result. He recommended the use of a solution of boracic acid (gr. v–x to aq. destil. ℥j) to be dropped into the eye, and, in severer cases, a saturated solution (gr. xviij to ℥j), or nitrate of silver with the ten grain solution of boracic acid, in the proportion of gr. j–iij to ℥j. Occasionally sulphate of zinc (gr. j to ℥j), or alum (gr. ij–iij to ℥j), may be substituted for the nitrate of silver with advantage, also solution of atropia. If judicious treatment could always be applied to this one disease only, an appreciable diminution in the number of pauper blind would soon be seen.

Scrofulous ophthalmia is another fruitful source of blindness among the children of the poor, but, if properly treated, loss of sight ought never to result. Build up the system with iron and bark, use a collyrium of sulphate of atropia (gr. i–iv to ℥j, according to the severity of symptoms) two or three times daily, and apply a bit of yellow oxide of mercury ointment (gr. j to vaseline ℥j) once a day.

Another very common cause of blindness is iritis, and yet of this affection too the same thing may be said. Too often it is neglected or mistaken for conjunctivitis with an equally unfortunate result. The liberal use of a strong solution of atropia (gr. iv–viij to ℥j) to produce as soon as possible thorough dilatation of the pupil, is the most important indication in iritis, the local abstraction of blood is frequently demanded, and constitutional treatment almost always, as there is usually a history of syphilis or rheumatism. Granular ophthalmia is another disease which destroys ten times as many eyes as it should, and chiefly for want of care in those who could by proper hygienic measures circumscribe its ranges. Sympathetic ophthalmia again annually adds largely to the blind population of our community, because of the willingness of those who have lost the sight of one eye to risk the other rather than submit to having the blind eye removed. Wherever the eye continues irritable, sensitive to the touch, and subject to recurrent attacks of inflammation, it should be removed without delay.

Glaucoma causes many more cases of blindness than it should, because its true nature is so often overlooked. It is of the greatest importance that this disease should be diagnosticated at the earliest possible moment, for in the more acute varieties the delay of a few days in the performance of iridectomy may make the difference between total blindness and complete restoration. Acute glaucoma is most apt to be mistaken for neuralgia of the fifth nerve, and chronic, non-inflammatory glaucoma is not infrequently confounded with simple cataract. Both these errors should be guarded against.

Many eyes are lost annually by those engaged in stone-cutting, etc., by their neglect of the common precaution of procuring a pair of protective spectacles.

Many other ways in which the sight is needlessly lost might be pointed out, but enough has been said to show the great importance, in the first place, that doctors generally should take more pains to familiarize themselves with those diseases of the eye which are liable to destroy the sight; and, secondly, that they should insist more strongly with their patients that it is never safe to look upon any inflammation of the eye as a trivial matter, and to impress upon them that promptness in the employment of remedies is essential, and that frequently blindness is the penalty paid for procrastination.

DR. J. J. CHISOLM read a paper on

REMOVAL OF A PIECE OF IRON FROM THE VITREOUS CHAMBER BY MEANS OF THE MAGNETIC NEEDLE.

After describing the results caused by the presence of foreign metallic bodies in the different parts of the eye, with the means usually employed for their removal, Dr. Chisolm said that whilst the properties of the magnet have been known for so long, it is remarkable that the idea of utilizing them for this purpose is only a very few years old. The first attempt to remove a foreign body from the eye with the magnet was made by Dr. McKeown, of Belfast, in 1874; but his instrument was so crude that his suggestion did not meet with favor. Five years later, Dr. Hirschberg, of Berlin, devised an appropriate magnet, and successfully removed a piece of iron from the interior of the eyeball. The needle was still further improved and perfected by Dr. E. Gruening, of New York, who has succeeded in combining the necessary properties of power and compactness. Dr. Chisolm then described a case in which he had extracted a considerable fragment of iron from the eye of a mechanic with this instrument. The patient whilst chipping off the edge of a boiler plate was violently struck in the right eye by one of the iron chips. On recovering from the first shock, he found that he had lost sight in the injured eye. Dr. Chisolm found the eye presenting the following conditions:

The anterior chamber was full of clotted blood, and only perception of light remained. There was a small wound in the lower part of the cornea. This was the only apparent injury, and the patient was of opinion that as the piece of iron must have been comparatively large it must have only struck the eye without entering it. He felt no special pain in the eye beyond a general stiffness of the lids and fulness of the eyeball. A small wound in the eyebrow was sufficient to explain the stiffness. Dr. Chisolm, however, though seeing no reason to doubt this explanation, probed the wound carefully with the smooth magnetic needle. It had not entered the blood-clot in the anterior chamber one-eighth of an inch before he felt the slight jar caused by some metallic fragment jumping towards it, and on the third attempt he drew out, through the wound, a splinter of iron half an inch long and weighing four grains. Cold-water dressing was applied, and a strong solution of atropia was instilled, and in three days the eye had cleared up and could be freely explored. The pupillary edge of the iris had been cut and the lens transfixed by the piece of iron in its passage, causing a traumatic cataract with largely ruptured capsule and leaving a ragged pupil which, however, had dilated under the atropia. In two weeks the eye gave so little trouble that the patient returned to his employment. Dr. Chisolm then described a somewhat similar case in which, however, the magnetic needle was not introduced till two weeks after the accident, and then detected nothing. Finally it was necessary to remove the eyeball, which was found to be completely disorganized in its interior. Embedded in a blood-clot, hardened by inflammatory exudation, he found a small fragment of iron, which was the cause of the injury. Probably it was too firmly embedded for the magnet to detach it.

FRIDAY, APRIL 25—FOURTH DAY.

DR. ST. GEORGE W. TEACKLE read a paper entitled

RESULTS FROM THE INVESTIGATION AND STUDY OF COWPOX,

in which he arrived at the following conclusions: 1. That cases identically similar to those from which Jenner conceived the grand idea of vaccination as a preventive and ameliorator of smallpox, and from which the first vaccination was performed, are continually occurring, especially during visitations of smallpox. 2. That in looking for a spontaneous case of cowpox independent of all contagion, atmospheric or otherwise, we are looking for something that does not exist, and did not in Edward Jenner's time. 3. That owing to the more convenient and perfect inoculation of the heifer by direct insertion of smallpox virus, a fresh and reliable virus can be obtained whenever smallpox exists.

DR. CONRAD then made some remarks on the

TREATMENT OF THE INSANE WITH SUICIDAL TENDENCIES.

He said that the insane who are inclined to suicide can be treated either by close watching, which is a method involving much expense and trouble, or by the straight-jacket, which is efficacious but very painful. He himself prefers the use of gloves of his own invention, which are far more comfortable. The gloves are stiff, and perforated to prevent sweating. They are joined together at the tip, and attached, but not closely, to the waist. He gave some cases illustrative of the value of these gloves.

DR. TEACKLE considered the gloves a great improvement on the straight-jacket.

DR. TIFFANY asked whether, when a person is bent on suicide, it can be prevented?

DR. CONRAD answered that they can for the time being be prevented, and if they can be prevented for a certain length of time they may outgrow the tendency, as has been the case in several of his patients.

DR. G. H. ROHÉ read a paper on

CERTAIN PRACTICAL POINTS IN THE PATHOLOGY, CLINICAL HISTORY AND TREATMENT OF CANCER.

After alluding to the indefinite manner in which the term *cancer* is too often applied, and to the consequent failures in treatment, he said that although absolute certainty in diagnosis was not to be hoped for, we may unhesitatingly subscribe to the statement of Dr. S. D. Gross that, "Just in proportion as our knowledge of morbid structure is positive, accurate, and comprehensive, will be the probability that we shall become skilled diagnosticians." He said that whilst the most eminent observers still hold contradictory views as to the special tissue to which the origin of cancerous growth is to be referred, it may be considered that the invariable anatomical condition present is *epithelium out of place*. He described the various theories held by Billroth, Rindfleisch, Koster, and others, as to the derivation of these epithelial cells, and said that the doctrine of Waldeyer, that "cancer is always developed from preëxisting epithelial tissue, *i. e.*, from those structures which are built up out of the upper and lower germinal layers of the embryo," seems to have the weight of authority and of clinical evidence in its favor. There is at any rate now no disagreement upon the point that the *one* histological condition is the presence of epithelial cells, confined or infiltrated in a stroma of connective tissue.

Although the ultimate cause of morbid growths seems to lie in an indefinable constitutional predisposition, Dr. Rohé considers that cancer is not either primarily or secondarily a constitutional disease in the sense that syphilis is. Even where the constitutional tendency exists, the local irritation is needed to cause the disease, *e. g.*, cancer caused by irritation of a pipe, in chimney sweeps by the irritation of the scrotum with soot, etc.

He called attention to the fact that morbid growths of an epithelial nature, but ordinarily innocent, may become malignant, such as warts, keratoses, papillomata, etc. Of this, he gave some instances which had come under his own observation. Some facts in the pathology of cancer shed light upon its clinical history, and may be considered with profit. *Pain* is a symptom popularly believed to be a constant accompaniment of cancer. So it generally is; but Dr. Rohé had met with at least four instances in which it was absent. He gave the particulars of one of these cases, in which the patient, a lady seventy-four years of age, complained of no pain, but died, nine months after he first saw her, of exhaustion, consequent on the drain on the system of a very extensive cancerous growth. Simple ulcers often cause far more pain than cancer; hence, pain cannot be relied on as a diagnostic symptom. *The induration of the morbid growth, or of the resulting ulcer*, when taken alone, is no more a characteristic symptom of cancer than that just mentioned. In cases of suspected cancer *induration of neighboring lymphatic glands* is one of the first points to be looked to for confirmatory evidence; but it should always be borne in mind that glandular enlargement is not synonymous with glandular *infiltration*. Dr. Rohé spoke of the fact that the malignancy of cancer is largely due to its tendency to produce similar growths in other parts of the body — secondary deposits, metastasis, or general infection, so called. He then described the various ways in which this takes place. As to the curative measures to be adopted, he said that in rare instances the cancerous ulcer does spontaneously cicatrize. There is really no such thing as the *cancer cachexia*, the cachexia which follows cancer being simply the result of the general breaking down of the system. He strongly recommended early operative measures, for, although there is apt to be a recurrence, the relief to the patient, the prolongation of life, and the possibility of a cure, afford amply sufficient reasons for an operation. He recommended the administration of arsenic, pushed to the limit of physiological tolerance, as very useful in modifying the tendency to epithelial degeneration.

DR. J. N. MACKENZIE described

TWO CASES OF REFLEX COUGH DUE TO NASAL POLYPI.

In both cases a dry, hacking cough had been present for years, and the patients suffered besides from obstruction of the nostrils, attacks of coryza, loss of appetite, etc., leading them to apprehend disease of the lungs. On examination, nasal polypi were discovered and removed, with the result in both cases of complete and speedy relief from the cough and other symptoms. Dr. Mackenzie said that the dependence of asthmatic attacks upon the presence of polypi in the nasal chambers is

sufficiently common, but the important *rôle* of the latter in the production of cough, has been apparently overlooked. He said that, so far as his experience went, cough is only present when the growths spring from, or in some way or other are brought in contact with, a portion of the erectile area, and generally its posterior portion. When the polypus is in such a position that it does not come in contact with this sensitive surface, no cough is produced. Dr. Mackenzie does not consider that the polypus is in itself provocative of cough or asthma, but only provokes it by irritation.

Dr. L. McLane Tiffany read a paper on

THE RESULT OF OPERATIVE MEASURES FOR RECTAL CANCER, WITH REPORT OF CASES.

He said that in operations undertaken for the relief or cure of malignant disease of the lower bowel, the result is considered good if prolongation of life with relief from pain is obtained. The experience of any one man in such cases can be but limited; it is only by uniting the experience of many that we can hope to discover the rules to guide the surgeon. He had already published the accounts of five operations which he had performed for cancer of the lower bowel, in different journals, and as at the time of publication the ultimate result was known only in one case, he would now proceed to report it as regarded the four others. In three cases the colon was opened in the left loin to avert impending death from obstruction; once the colon was opened in the same situation for the relief of pain without complete obstruction, and once the lower rectum, with anus, was excised for epithelioma. In two of the cases, in which left lumbar colotomy was performed, the patients lived respectively fifteen and seventeen months after the operation. In both cases the relief from pain was entire, and in both death was caused by asthenia. In the third case death was from pelvic cellulitis, after abortion, about three months after the operation. The patient had already missed two menstrual periods before the operation, but there was complete obstruction of the bowel, calling imperatively for interference. The presence of the fœtus in nowise complicated the colotomy, and but for the rapid increase of the cancer the child might have been carried to term. In the last case, in which the lower rectum, with anus, was excised, there had been no return of the disease twenty-one months after the operation. The rectum seemed to be in all respects healthy, and there was no incontinence of feces.

Dr. Charles G. Hill read a paper entitled

THE COMMON SASSAFRAS—A POTENT DRUG AND A DANGEROUS NARCOTIC.

He said that, whilst sassafras has ceased to be considered officinal by the profession, it is still largely used as a domestic and patent medicine. His attention had been called to its powerful narcotic properties by the case of a boy who, after taking two "large swallows" from a bottle of the oil of sassafras, shortly became very stiff, and fell on the floor almost unconscious. He was recovered from this condition by the administration of a violent emetic and by copious draughts of warm water. Wishing to investigate the subject further, Dr. Hill undertook a course of experiments with this drug on mice, cats, and dogs, which he described, with results which convinced him that, instead of being an innocent and useless drug, the common sassafras possesses properties of the most potent character as a narcotic, a germicide, and an antiferment, and, if properly understood, may prove a valuable addition to our therapeutics, but if ignorantly and carelessly used may become dangerous and even fatal to human life.

Dr. Eugene F. Cordell reported a case of

CONGENITAL ABSENCE OF ONE OF THE VALVES AT THE MITRAL ORIFICE.

The case was of especial interest, not only from the rarity of the affection—all the other valves being perfect—but also from the fact that he had diagnosticated the mitral insufficiency before the child was born from the peculiarity of the sounds heard when auscultating the fœtal heart. The child died soon after birth, and the parents gave their consent to an autopsy. The heart was shown to the members of the Faculty after the reading of the paper. After looking over a large amount of literature bearing on the subject, he had not been able to meet with a similar case.

A joint paper by W. H. Howell, Fellow of the Johns Hopkins University, and Dr. F. Donaldson, Jr., was then read, on

THE MAXIMUM VOLUME OF BLOOD SENT OUT BY THE LEFT VENTRICLE IN A SINGLE BEAT, AND THE INFLUENCE OF VARIATIONS IN VENOUS PRESSURE, ARTERIAL PRESSURE, AND PULSE-BEAT UPON THE WORK DONE BY THE HEART.

It was observed that the methods hitherto used in estimating the quantity of blood pumped out from the left ventricle at each systole have been so indirect that little reliance can be placed upon them. The results obtained by Volkmann, Vierordt, and Fick were adverted to. They varied considerably. Dr. Donaldson and Mr. Howell, in their experiments upon this important and interesting point, made use of a dog's heart, completely isolated from all other organs of the body by Prof. Martin's method. By this method the quantity of blood ejected from the left ventricle at each systole under varying conditions of venous pressure, arterial pressure, and pulse-rate can be determined directly by catching the blood as it is pumped out from the tube connected with the aorta of the dog.

The main results of these experiments were as follows: The ratio of the maximum weight of blood pumped out from the left ventricle at each systole to the body-weight at the normal pulse-rate (120 per minute) of the dog is about $\frac{1}{70}$th, or .0014. Probably this represents very nearly the average quantity pumped out at each systole in the living dog. The precise calculations, value of the venous pressure, etc., employed in these experiments were given in support of this conclusion, and it was added that since there is so much difference in the pulse-rate between the dog and man, no inference can be made with certainty from the results obtained with the dog to the case of man.

Variations in arterial pressure have practically no direct effect whatever on the quantity of blood sent out from the left ventricle at each systole. Variations of from 58 to 147 millimetres were tried, and the amount of blood remained maximal throughout, the heart, of course, working more or less in direct proportion to the

arterial pressure against which it worked within the limits named. The venous pressure on the right side was gradually increased from 10 centimetres to 60 or 70 centimetres, and the outflow from the aorta measured for each venous pressure used. It was found that the outflow from the left ventricle, and, consequently, the work done by it, increases with the venous pressure—but not proportionally—up to the point of maximum work.

The most direct factor influencing the quantity of blood sent out from the ventricle is the intraventricular pressure, by which it is distended during diastole. During life, this pressure must be mainly owing to the action of the auricles, since the pressure in the great vein emptying into the auricles never rises to any important, positive value.

The rate of beat of the heart was varied in these experiments from 228 to 77 beats in a minute, and back again to 140 in a minute, and so on. The results were that the total outflow and the total work done during any given period of time decreases with a diminished pulse-rate, and increases with an increased pulse-rate.

DR. MICHAEL gave notice that he would move an

AMENDMENT TO THE CONSTITUTION,

to change the words "any gentleman" to "any person" in the clause relating to the admission of members.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—T. S. Latimer, M.D.

Vice-Presidents.—Drs. John R. Quinan and I. E. Atkinson.

Secretary.—Dr. G. Lane Taneyhill.

Assistant Secretary.—Dr. Robert T. Wilson.

Corresponding Secretary.—Dr. T. Barton Brune.

Reporting Secretary.—Dr. Richard Henry Thomas.

Treasurer.—Dr. W. F. A. Kemp.

Executive Committee.—Drs. P. C. Williams, Thomas F. Murdoch, L. McLane Tiffany, John S. Lynch.

After a vote of thanks to the Trustees of the Johns Hopkins University for the use of Hopkins Hall, the Faculty adjourned *sine die*.

THE AMERICAN SURGICAL ASSOCIATION.

Fifth Annual Meeting held at Washington, April 30, May 1, 2, and 3, 1884.

(Specially reported for THE MEDICAL NEWS.)

WEDNESDAY, APRIL 30TH—FIRST DAY.

THE meeting was called to order in the Hall of the National Museum Building by the PRESIDENT, DR. E. M. MOORE. The Secretary, Dr. J. R. Weist, read the minutes of the last meeting, which were adopted as read.

THE PRESIDENT, E. M. MOORE, M.D., of Rochester, N. Y., then delivered the *President's Address*, choosing for his subject,

EARLY AND LATE OPERATIONS.

After a few remarks in recognition of the distinction conferred upon him in his election to the office of President of the Association, and in commendation of the noble work done in the organization and support of the Association by his predecessor in the office, attention was called to the unmistakable need of a society of this kind. Herodotus tells us that the early Egyptians recognized the necessity of dividing the profession into those treating the internal diseases and those treating the external—the therapeutic and the mechanical; the peripharmicon and the periorganon. The peripharmicon has been lost, until recently the mummy of a distinguished physician has been found, wrapped in a papyrus, which gives us at least a portion of the therapeutic methods of the Egyptians fifteen hundred years before Hippocrates. Unfortunately, he said, the subject-matter is not surgical, and we have but to hope that the periorganon may yet be unrolled from the remnant of one of our own special craft. It is to be regretted that the religion of this writer forbade his publishing his name. Although Hippocrates was thus, in all probability, only a teacher of what had gone before, we must still revere his name, both because of the excellence which he must have attained and the common sense which pervades all his works.

The speaker then referred to the manner in which surgery is altered by its surroundings. It has always flourished when the mind was liberated from unnatural restraint. It is the marvellous combination of the practical surgeon and the philosopher that marks the broad, rounded character of greatness. How little of wide, popular recognition one of our profession enjoys, he said, is peculiarly illustrated in the appreciation of the great contemporaries—Pericles, Socrates, and Hippocrates, the metaphysicians and the physician. While most of the methods employed by Hippocrates have been replaced and surpassed, there can be no doubt of their successful application in his time. Another striking point in ancient surgery is the importance of operations now little thought of; and in many of our modern methods we recognize merely another form of those used by the ancients.

From this early time, the speaker passed directly to the time of the renaissance, an epoch which he said had been one of the most fruitful in all literature, the intervening time being productive of naught. The school of Salernum, he said, assisted in nothing but the retention, in a limited way, of the ideas of the past. At the time of the renaissance we meet Vesalius, a son and a grandson of physicians. Notwithstanding the great intellect of the man, however, had not the grand current of cultivation been in full flow, we should not have had a Vesalius. But if Vesalius had not lived, Eustachius, born six years after, would have taken his place. His aim was broader than that of Vesalius, and he laid the foundation of comparative anatomy.

From this wonderful time the great movement of medicine has gone on with an ever-widening stream. Next came Fallopius, then Fabricius and Harvey, and now vivisection is added to the means of investigation. The days of Perkins's tractors, Hahnemannism, eclecticism, etc., are reserved for a later date. The literary exaltation soon ran into absurdities. At the present day we are almost dazed with print, and hence there are attempts to codify knowledge; hence the retrospects, manuals, and year-books, to compress for our understanding the fertility of invention.

Reference was then made to the advance in the more important and recent operations—ovariotomy, nerve-

stretching, gastrotomy, etc. This is the golden age of inquiry. The particular movement of the day is toward specialties. The large *clientèle* of a well-known specialist is the assurance of wealth. That excellence follows large experience in narrow lines is obvious, but is there not reason to fear, the speaker asked, that a specialist who is not well informed, both by learning and practice, is apt to blunder? This is the great danger of the day. An Association such as this is the need of the present; one that represents the broad and not the narrow lines of surgery. The future to America is big with promise. The institutions which have fostered medical learning are worthy of all praise. The fabulous accumulation of wealth during the last twenty-five years occasionally induces its possessor to honor himself by the patronage of learning. We have a Johns Hopkins University, and we believe others will follow. The future worker in medicine will always reach closer and closer to the law of disease, and perhaps the exact statement which the chemist can make in definite proportions may at length crown the labors of the therapeutist: "All things are divine, but also scientifically determinable."

DR. BASIL NORRIS, Chairman of the Committee of Arrangements, made a brief report, showing that the necessary arrangements had been made, and welcomed the Association to Washington.

THE REPORT OF THE SECRETARY

showed that there are ninety-three Fellows in the Association, and three honorary members. Since the last meeting, Honorary Fellow Dr. A. C. Post and Fellow Dr. George A. Peters, both of New York, have resigned, their action being necessitated by the communication addressed to them by order of the Association, asking all members who opposed the National Code of the American Medical Association to withdraw. Dr. Markoe, who was elected a Fellow at the last meeting, declined the membership. Honorary Fellows Dr. J. Marion Sims and Dr. Willard Parker have been removed by death. The report further stated that a number of members have not yet replied to the communication addressed to them in regard to their allegiance to the Code of Ethics.

DR. J. EWING MEARS then read the report of the

COMMITTEE ON PUBLICATION.

He stated that the volume of *Transactions* had been printed as directed, and disposed of as ordered. Communications were also read from the Royal Medical and Chirurgical Society, London, King's College, London, The Royal College of Surgeons, of England, John Eric Erichsen, London, Bobb's Library, Indianapolis, The College of Physicians of Philadelphia, and the New York Academy of Medicine, acknowledging the receipt of copies of the *Transactions*.

DR. B. A. WATSON, of Jersey City, then read a paper on

AN EXPERIMENTAL STUDY OF ANÆSTHETICS.

The author introduced his subject by stating that it was the aim of his paper to show, by experiments on rabbits and dogs, the physiological action and relative safety of those anæsthetics which are most frequently used by surgeons. The anæsthetics employed were chloroform, sulphuric ether, bromide of ethyl, and various mixtures of these drugs.

The observations in these experiments were chiefly limited to the temperature, pulsations, respirations, mortality, and *post-mortem* appearances; but the conclusions reached through the experimental investigations made by Dr. H. C. Wood, of Philadelphia, for the purpose of determining the physiological action of chloroform, sulphuric ether, and bromide of ethyl on the heart are likewise mentioned.

The introduction to this article was followed by a brief explanation of these experiments, which was intended to prepare the reader for a full comprehension of the work performed, and which was connected with the anæsthetizing of eighty-two rabbits and twenty-five dogs. Following these explanatory notes, there were presented in a tabulated form the general results, which are contained in ten tables, six of which relate to the experiments performed on rabbits, and four to those on dogs.

The tables are followed by a comprehensive *résumé* of the results, and the author remarks that their most casual inspection cannot fail to impress the observer with the relatively small mortality produced by the sulphuric ether, when it is compared with that which followed the use of the bromide of ethyl, chloroform, or the mixtures which were employed.

The percentage of the mortality produced by the different anæsthetics employed in the experiments on rabbits was as follows:

Sulphuric ether, ...	16⅔
Chloroform, ...	62½
Bromide of ethyl, ...	50
Alcohol, chloroform, and ether mixture,	75
Alcohol, chloroform, and ethyl mixture,	66⅔

Attention is called to the fact that owing to the evanescent character of the bromide of ethyl, it was found impracticable to keep the rabbits constantly under the influence of this drug or its mixtures; and consequently the figures given in the above do not accurately represent the mortality which may justly be anticipated when these animals are kept under its full influence for two hours—the period during which full anæsthesia was intended to be continued in all of the experiments. The above comments are entirely limited to the administration of the bromide of ethyl and its mixtures to the rabbits, the same not applying in any degree to the dogs, or to any other anæsthetic. The whole number of dogs experimented on was twenty-five, and among these, twelve deaths occurred, in which the percentage of mortality chargeable to the different anæsthetics was as follows:

Sulphuric ether, ...	.00
Chloroform, ...	.00
Alcohol, chloroform, and ether mixture,	.80
Alcohol, chloroform, and ethyl mixture,	.80
Bromide of ethyl, ...	100.00

It is shown by the above comments, and others which follow in the author's detailed statements, that the danger arising from the use of the bromide of ethyl and its mixture is more accurately portrayed in the experiments on dogs than in those on rabbits. The author finally reaches the conclusion that the *primary effect of the bromide of ethyl resembles that of chloroform*, and not that of ether; but it is certainly much more dangerous than the former agent, especially when full anæsthesia is continued with it for a period of two hours. The

deaths which occurred in the experiments, during the administration of the ethyl, are believed to have been caused by its paralyzing action on the heart, while those occurring at a later period were probably more or less dependent on the same; but in these cases the *post-mortem* appearances reveal extreme congestion of the principal visceral organs, with other indications of inflammation in all cases in which death was sufficiently delayed.

We have now reached a point in our study of the various anæsthetics where we believe we are justified in *firmly asserting*, in the light of the theoretical and practical knowledge which we now possess of the action of the bromide of ethyl, that neither this drug nor its mixture should ever be employed for the production of anæsthesia, especially where it is necessary to prolong this state. It has long since been sufficiently shown that sulphuric ether is decidedly the safest anæsthetic which has yet been employed in general surgical practice; and our experiments are merely confirmatory of the correctness of this decision. The use of a mixture of alcohol, chloroform, and ether, for the purpose of producing anæsthesia, is theoretically wrong and practically bad, since it is unquestionably much more dangerous than sulphuric ether.

DR. W. W. DAWSON, of Cincinnati, in opening the discussion, said that he believed the sentiment of Dr. Watson's paper was correct. He had had a rather painful experience with chloroform, and narrated two cases which had terminated fatally. The first was in 1868, before the agent was considered dangerous. He was amputating a foot. The field of operation became bloodless; artificial respiration was practised without success. At that time, he said, we were unwilling to admit that chloroform could kill, it was so prompt in its action. The second case lost was that of a little boy. In that case, also, the first symptom was the cessation of hemorrhage from the field of operation. The anæsthetic was for a moment withdrawn. The patient revived, and the operation was proceeded with. Soon the operation again became bloodless, and the same occurred a third time. This time it was permanent. The heart had ceased to beat, and failed to start even after the most energetic artificial respiration.

The speaker further stated that since this experience he was very cautious in the use of the alcohol, chloroform, and ether mixture, and preferred ether alone. He further reported the case of a woman who, although she had several times taken chloroform during parturition, and at one time had remained under its influence for an hour, died after a few inhalations in a dentist's chair.

PRESIDENT MOORE called attention to the fact that the woman just spoken of was in all probability in an erect posture when inhaling the ether, a position which renders the danger much greater.

DR. DONALD MACLEAN, of Detroit, spoke strongly in favor of chloroform. He did not believe the dangers from its use much, if any, greater than those from ether. He has used it almost exclusively in his practice. A great deal of the danger, he believed, is in the mental impression made by using the anæsthetic. Other cases, too, die from other causes than the action of the anæsthetic. In this connection he reported the case of a woman whom he saw a week ago. She was a robust woman, apparently in perfect health, except a slight asthmatic dyspnœa, a common affection in Michigan. He decided to operate in a few days for an ovarian tumor. He had been away only an hour when she died. Had the operation been in progress, or had the patient taken a breath or two of chloroform, her death would have been attributed to it. He had never seen death from an anæsthetic, and had had trouble in only very few. The last case in which there was any cause for alarm was that of a man from whom he had just removed the entire tongue. The instrument not working perfectly, there was some hemorrhage. Blood was drawn into the larynx, but after removing the blood, and practising a little artificial respiration, all came right. In conclusion, he stated that while he believed in the use of chloroform, he believed it equally important that the agent be administered by a competent person, able to recognize and handle any complications that may arise.

DR. WILLIAM A. BYRD, of Quincy, Ill., took his stand with those who opposed the use of chloroform. He had lost but one case, and that a woman who had been operated upon several times before coming under his care, for a vesico-vaginal fistula; being once nine hours anæsthetized. He had also kept her under chloroform for an hour without any symptoms of danger, and the fistula was closed. When, however, he went to remove the stitches, the patient demanded an anæsthetic. She took only a few inhalations, when she suddenly died. He further spoke extensively of the action of the bromide of ethyl. He had at first used it with the fullest confidence, but had abandoned its use later, on account of its action being so profound and causing such marked suffusion of the face. He now uses a mixture containing one ounce of ethyl bromide, three ounces of ether, and two ounces of alcohol. The action of this, he said, is prompt, efficient, and, as far as his experience goes, safe.

DR. L. MCLANE TIFFANY, of Baltimore, said that he must negative absolutely the statement of the essayist in regard to the similarity of action between the bromide of ethyl and chloroform. Clinically, the action is different. He had never had a fatal case due to chloroform, although he had seen patients in great danger. No one, he believed, could use it with perfect confidence; and he referred to the experience of the late Dr. Sims, who after having most excellent results from its use, lost a case shortly before his death. He referred to the practice of Dr. Chisolm, of Baltimore, who uses the ethyl bromide in ophthalmic operations, with no inconvenience.

DR. P. S. CONNER, of Cincinnati, stated that he had used the bromide of ethyl pretty extensively in the Cincinnati Hospital. He had been both surprised and astonished at its action on the heart. He had seen the pulse run up from 100 to 120 during its administration. He had never seen an agent so mild and efficient in its action, and yet so profound, and apparently not dangerous. He did not believe that any anæsthetic agent can be called safe. It is impossible, he said, to carry patients to the border-line of life, without now and then some one slipping beyond that line. Such being the case, he believed it the duty of the surgeon to employ the agent of least danger.

At the suggestion of the President, the discussion was

suspended for the reading of the paper of DR. DAVID W. CHEEVER, of Boston, on

SOME OF THE DANGERS AND DISADVANTAGES OF ANÆSTHESIA.

The essayist stated, in the beginning of his paper, that the form of anæsthesia to be considered was that produced by sulphuric ether. Deaths from ether are rare; the speaker had not seen one in an experience of twenty-six years. The largest statistics give one death in 23,204 cases. The vast array of advantages connected with the anæsthetic state, coupled with the comparative freedom from danger, have masked dangers which may arise. Ether can kill, and there are operations that can better be done without it. The speaker then passed to the consideration of the dangers themselves. The danger in breathing ether, he said, is chiefly from impeded or failing respiration.

The first cause of danger to the respiration is the production of stertor and the falling back of the tongue.

Second, in some persons, and we cannot foresee in whom, the mucous membrane of the throat and air-passages is very sensitive to the fumes of ether, a difficulty first shown in croupy respiration, and soon followed by the flow of a frothy mucus.

Third, a most dangerous complication is tetanic setting of the inspiratory muscles of the chest. No air enters; respiration with the diaphragm fails to fill the lungs, and the patient dies as in true tetanus.

Fourth, simple exhaustion is another source of danger. Death may occur from slowly failing respiration, so gradual as not to attract attention.

Fifth, disease of the heart may cause death during the inhalation of ether. Well-marked valvular disease, pericarditis, and effusion, or a fatty or feeble heart, may contribute to a fatal result, and yet persons with valvular disease have frequently been anæsthetized in safety, by using caution and taking plenty of time.

Sixth, apoplexy, sanguineous or serous, may follow the coma of etherization in the old or in drunkards. Atheromatous vessels may give way under the great congestion produced, and the "wet brain" of alcoholism may succeed the stupor of ether.

The author now passed to the consideration of the disadvantages of anæsthesia. Etherization, in his opinion, does diminish primary shock; it removes apprehension and annuls pain, but it does not remove the secondary shock which follows an operation. While the primary effect of ether is stimulating, the secondary is exhausting. Another marked disadvantage of anæsthesia is that it decoys the operator into delay and slowness. Drunkards and steady drinkers succumb slowly to the anæsthesia of ether; they pass through a long period of excitement and delirium, and they are subject to persistent and recurrent tremor, which delays an operation, or jeopardizes its safe execution. Vomiting and lasting nausea are also among the disadvantages. This is especially disastrous in abdominal sections, in operations for hernia, and in sections of the cornea and iris. Lastly, intoxication and delirium, on coming out of anæsthesia, are especially injurious after a simple or, worse still, after a compound fracture has been set.

The following operations, Dr. Cheever believed, may be better done without anæsthesia: extraction of cataract, tracheotomy for disease, and paracentesis thoracis. He stated further that there is no doubt that complete anæsthesia during parturition leads to tardy contraction of the uterus after labor. It is a noteworthy fact that most deaths from ether occur during operations on the rectum, perineum, or vagina, the reason being that the surgeon, from his position, cannot well watch the condition of his patient. The essentials for giving ether are, an empty stomach, a loose neck, a free abdomen, an easy, semi-recumbent position, a sponge wrapped in towels for the ether, and a gag and forceps for the tongue. The paper closed with a few directions in regard to the treatment of some of the more common dangerous symptoms, and with the advice that in order to avoid asphyxia, nausea, headaches, and be *safe*, only the purest anhydrous sulphuric ether should be used.

DR. T. F. PREWITT, of St. Louis, spoke of the importance of the question under consideration. He agreed fully with Dr. Watson that ether is the safest anæsthetic agent. He never had a fatal case, but had had cases in which difficulty was experienced in reviving the patient. He congratulated Dr. Maclean on his satisfactory experience, but feared that he would yet have a reverse. He had been in the habit of using chloroform in operations upon children, and believed that it was safe, but he thought the case reported by Dr. Dawson an important one in this regard. In regard to the method of administration, he preferred the simple cone made with a towel, covered with paper, and containing a sponge. He said, however, that he had frequently seen half an hour consumed in producing anæsthesia.

DR. BONTECOU stated that he had seen probably a thousand individuals anæsthetized with chloroform before ether came so universally into use, but that he had never seen a fatal case. He however reported the case of a man who died on the table after being anæsthetized with ether, but could not state whether the death was from shock or from the operation. Since 1865 or 1866, the speaker had always used ether, not so much from preference as in deference to the sentiment of the profession in regard to the dangers of chloroform.

DR. NANCREDE referred to a method of drawing the jaw forward, as well as opening the mouth, in order to relieve asphyxia.

DR. PARKS referred to the danger of introducing blood into divided veins by performing artificial respiration, especially in operations about the neck.

DR. GEORGE W. GAY reported that he had been for twenty years connected with a large hospital in Boston, where the use of ether was a daily occurrence, but they were afraid to use chloroform on account of prejudice. The rule there is to give ether slowly. The speaker described the inhaler used. There is another method, he remarked, which had just been tried at the city hospital. It is the administration of ether by the rectum. The evaporation of the fluid from a bottle being hastened by warm water, and the vapor conducted into the rectum by means of a rubber tube. In three cases in which it was tried it acted satisfactorily.

DR. DAWSON reported two cases; one in which, in order to produce sufficient anæsthesia to perform a perineorrhaphy, he was compelled to give chloroform in addition to ether; and another in which, even with chloroform, he was unable to get the patient quiet, but had literally to cut for stone "on the wing," as he expressed it.

DR. CAMPBELL, of Augusta, had also experienced a similar difficulty in operations upon the perineum.

DR. BASIL NORRIS, U. S. A., wished to emphasize the importance of administering chloroform only with the patient in the recumbent posture. He also reported a case in which he had seen a distinguished French surgeon almost lose a patient, but by the vigorous slapping of the face and chest by an assistant, vitality was restored.

DR. WATSON said that in his statement that the action of the ethyl bromide resembled that of chloroform, he referred only to its action on the heart.

DR. CHEEVER closed the discussion with the statement that, with the jaws apart and the tongue well carried forward, it is only necessary to depress the jaw.

On account of the illness of Dr. S. D. Gross, his paper, on

WOUNDS OF THE INTESTINES

(see page 495), was read by Dr. Richardson.

DR. MACLEAN, in referring to what was said in the paper on the liability to the development of tympanites, said that he believed it, to a great extent, due in many cases to the cathartic medicines employed in connection with the cases. He stated, further, that he did not believe the author of the paper could express a preference for silk suture if he had tried the silkworm gut-suture or horse-hair. Either of these, he said, is less irritating, and has no absorbtive powers.

DR. PARKS expressed preference for the catgut suture in intestinal wounds, because, in his experience, both horse-hair and the silkworm gut are too brittle.

DR. BYRD reported several cases in which he had repaired injured intestines, using in most cases the ordinary silk suture, with good results.

DR. RICHARDSON closed the discussion by calling attention to the fact that Prof. Gross, in his paper, advocated freely opening the abdomen in cases in which injury to the intestine is suspected. He believed, for his own part, that, with our present knowledge of the impunity with which the peritoneal cavity can be handled, the advice of the distinguished author was correct, and he heartily endorsed it.

THE PRESIDENT then read a resolution, to be sent by telegraph to Dr. Gross, expressing regret at his absence, sympathy in his illness, and a hope for his speedy recovery.

DR. L. MCLANE TIFFANY, of Baltimore, next read a paper entitled

A CONTRIBUTION TO THE HISTORY OF LIGATION OF THE COMMON FEMORAL ARTERY.

After referring to the varied advice given by different authors relative to the ligation of the common femoral artery, and the fact that while some express little choice, others prefer the ligation of the external iliac, the essayist reported several cases, with the cause for the operation, its method, and results.

The following conclusions were arrived at:

1. Ligation of the common femoral artery in continuity for distal wound is attended with great mortality.

2. Ligation for elephantiasis and aneurism is proper.

3. The crural sheath should be freely opened, and the vessel carefully examined for the branches of the profunda and epigastric; ligation not to be made within a half or three-fourths of an inch of either.

4. A half or three-quarters of an inch below Poupart's ligament is the best locality for the ligature.

5. The presence of a small branch near the seat of ligature does not contraindicate the operation; such branch should be also tied.

DR. CAMPBELL reported three cases in which he had ligated the common femoral for injury, with a fatal result in each case. He said that almost immediately after the operation the limb became cold, and then shock ensued, the patient dying even before a line of demarcation had time to form. He had had gangrene result, from a ligation of the superficial femoral, below the knee, but the process was quite different from what occurred in these cases; there the necrosis occurred slowly; here, the action was rapid, and death resulted from some impression made on the general system. In cases of aneurism, in which a good collateral circulation has been formed, the result is, necessarily, more favorable.

DR. BASIL NORRIS reported a case which occurred to him and his associates in early army duty, in which they ligated the common femoral for aneurism, the wound healing promptly, and perfect recovery ensuing.

DR. TIFFANY concluded the discussion by thanking Dr. Campbell for so heartily endorsing his conclusions.

DR. P. S. CONNER, of Cincinnati, then read a paper on

TRAUMATIC CEPHALHYDROCELE, WITH A REPORT OF TWO CASES.

The first case was that of a boy, twelve and a half years old, who, as the result of a fall from a wagon, sustained a depressed fracture of the occipital bone, with the formation of a cyst containing a pale, serous fluid, believed to be of cerebro-spinal origin. The case was treated by occasional removal of a part of the fluid and compression. A good recovery was made.

The second case was produced in a different manner, but resulted in a tumor with much the same features.

Reference was also made to twelve other reported cases, and deductions drawn from them relative to the cause, treatment, and prognosis of the injury.

There being no discussion of this paper, DR. CHARLES B. NANCREDE, of Philadelphia, read his paper on

SURGICAL INTERFERENCE IN CEREBRAL ABSCESS.

After referring to the many cases in which death occurs from cerebral abscess without any procedure having been instituted, he reported quite an array of cases in which the trephine had been applied and pus evacuated, either immediately or after puncture of the membranes. One very interesting case was that in which after trephining through the skull unmistakable evidences of the presence of pus were present, but several punctures of an aspirator needle failed to discover its exact location. When a large abscess was opened by the knife and a half ounce of pus allowed to flow, the patient, apparently dead at the time of the incision, revived.

DR. RICHARDSON reported a case in which no evidence of fracture of the skull could be detected during life, but in which the autopsy revealed a very minute fissure, with an abscess in the brain substance.

DR. CAMPBELL narrated the case of a soldier who was struck by the falling débris of a house during a

battle. His skull was fractured. Unmistakable symptoms of abscess followed. The skull was trephined, three or four ounces of pus were evacuated from a large cavity, but respiration immediately ceased, apparently as a result of the removal of the pressure from the brain.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, April 22, 1884.

THE VICE-PRESIDENT, CHARLES MCBURNEY, M.D., IN THE CHAIR.

ELEPHANTIASIS; LIGATION OF THE FEMORAL ARTERY.

DR. L. A. STIMSON presented a woman whose femoral artery he tied four weeks ago for elephantiasis of the leg.

She is fifty years old, and has always been healthy. Twelve years ago she had an attack of erysipelas in the foot, which soon got entirely well, but was followed after a month by another in the right leg which left the limb somewhat swollen; other attacks followed at intervals of two and three months for several years, leaving the limb larger, after each attack, than it was before. She was admitted to Bellevue Hospital, March 4, 1884, with well-marked elephantiasis of the entire right leg from the knee to the ankle, both the foot and thigh being very œdematous and the skin normal. She was kept in bed, firm pressure made on the leg by a roller bandage over a layer of cotton, and an elastic bandage kept upon the thigh. After about three weeks of this treatment the œdema had left the thigh, but the leg was unchanged, and still measured twenty-three and a half inches in circumference. The other leg measured eight and a half inches at the calf. March 24, the femoral artery was tied at the apex of Scarpa's space with catgut, and the limb wrapped in a thick layer of cotton. April 2, the dressing was changed, and the wound found healed; the leg measured twenty-one inches and the foot was much less œdematous. The rubber bandage was then applied snugly to the leg over a layer of cotton, and has been used constantly to the present time, and the patient kept in bed. April 4, the leg measured seventeen inches; April 8, fourteen and three-fourths inches; April 12, twelve and three-fourths inches; and that is its present size.

Dr. Stimson had refrained from using elastic pressure before the operation because the books speak so discouragingly of its efficiency, and he regretted now that he had not used it, even if only to prove such inefficiency, and in a similar case he would give it a thorough trial before resorting to operation. At the same time he felt obliged to call attention to the rapid decrease of the œdema during the first week under the influence of the operation alone, and he thought it quite probable that the ligature and the bandage employed in concert had done much more than either would have done alone.

DR. POST had a case, several years ago, of commencing elephantiasis, occurring in a person who came from the West Indies, and in which great benefit followed continued pressure from the bandage. The disease was in its early stage. When the patient left, there was an approximation to an apparent cure.

DR. BRIDDON saw a case, in the New York Dispensary, several years ago, in which there was considerable doubt as to whether it was a case of obstruction of the lymphatics only, or one of true elephantiasis; but, at all events, marked benefit was afforded by the application of bandages wet with soda water. The condition, however, returned in a measure, due to discontinuance of the treatment, and the return of the patient to his bad habits. Dr. Briddon remarked that, if his memory served him correctly, Dr. Carnochan was the first who treated cases of this kind by ligation of the femoral artery.

DR. LITTLE said that Dr. Carnochan's case was the first treated in this way; only temporary relief was afforded.

DR. E. L. KEYES said that the opinion of dermatologists was against ligation of the femoral artery in the treatment of elephantiasis. The twelfth case operated upon was reported by Dr. Buchanan in the *British Medical Journal*, 1867, p. 465, who reported that nine had been cured; in two improvement occurred, and a third patient died of pyæmia from the operation.

In the *Deutsche Zeitschrift f. Chirurgie*, 1876, thirty-two cases were reported. Of these, there were twenty-three in which ligation of the femoral artery was performed, and of the twenty-three cases there were relapses in all except three. The consequence is that the operation is looked upon as one which may afford rapid amelioration in all cases, perhaps, but it does not give a permanently favorable result. Dr. Carnochan's case (AMERICAN JOURNAL OF THE MEDICAL SCIENCES, July, 1867, p. 109) was one of elephantiasis græcorum, which differed materially from elephantiasis arabum, the malady treated in Dr. Stimson's case, and in most other cases of ligation.

Another case had been reported by Dr. Van Zetti (*Gaz. des Hôp.*, No. 144, 1876, p. 572), in which the femoral artery was tied. A starch bandage was applied, and the patient was directed to go home, and to keep up the pressure by means of such a bandage for some time. At the end of three years the patient returned, having kept up pressure by means of the starch bandage continuously for the entire time, and the result was that the disease had become permanently cured, and the limb was somewhat smaller than its fellow. Dr. Keyes thought that it would be proper to apply pressure, not only to reduce the œdema, but for the purpose of maintaining continued pressure to prevent the disease from starting afresh. So far, then, as the present evidence stands, it is to the effect that the operation always gives benefit, but, generally, it is temporary.

URETHRAL CALCULUS.

DR. JAMES L. LITTLE presented a specimen accompanied by the following history: On October 26, 1883, I was called to see a boy about twelve years of age, who gave the following history: The night before, while playing marbles in a stable, he received a severe contusion of the perineum, by suddenly squatting down and coming in contact with the blunt end of an iron hook. This gave rise to considerable pain and straining without enabling him to void his urine. In the morning, about nine o'clock, his straining efforts were followed by blood and bloody urine. Dr. Gibney was called to see him in the morning, and believing that a laceration of the urethra existed, sent for me. Upon examination, I found a considerable tumefaction and discoloration of

the perineum and scrotum; the bladder was distended, and bloody urine dribbled from the meatus. On straining, clear blood, followed by a little urine, was passed. The sound was arrested just opposite the pubes, coming in contact with a substance, which, at the time, was supposed to be bare bone. The patient was etherized, and a free incision made in the median line of the perineum, cutting through œdematous tissue until the urethra was reached. There was no extravasation of blood in the deeper tissues, nor could any laceration of the urethra be detected. The urethra was opened, a catheter passed, and the bladder emptied. The urine was discolored with blood. A probe passed upwards into the urethra, came in contact with a hard substance, which, when withdrawn by a pair of forceps, proved to be a rough calculus.

The symptoms which presented themselves on first seeing the case, together with the incomplete history, plainly indicated laceration of the urethra. A more careful study of the case, however, showed that as no blood followed immediately after the injury, but came on several hours later, while making some straining efforts to evacuate the contents of his bladder, it was plainly due to the passage of the calculus through the urethra, and not to the original injury. The patient made a good recovery, six weeks after the operation a good-sized instrument passing into the bladder without any obstruction.

On inquiry, I found that the boy had suffered from symptoms of stone, for nearly two years, but, considering the size and rough surface of the calculus, they were very slight.

CALCULUS REMOVED BY LITHOLAPAXY.

DR. LITTLE also presented a specimen of vesical calculus which he removed March 22d from a patient sixty-six years of age, who presented himself at the Post-graduate Medical School with symptoms of enlarged prostate and also stone in the bladder. On introducing a sound he touched a stone without difficulty. The patient was sent to St. Luke's Hospital, where he was etherized and Dr. Little made an attempt to seize the stone and crush it. After working for three-quarters of an hour, he touched it with the sound, but was unable to seize it with the lithotrite. The bladder was therefore washed out with Thiersch's boro-salicylic solution and further operative procedure discontinued. No bad symptoms followed the operation. Two weeks afterward he again etherized the patient, and after half an hour's manipulation came in contact with the stone, seized it, but could not retain it in the grasp of the instrument, and was unable to find it again. He then washed out the bladder with the same solution as before. No reaction followed, and the patient was much better after than before the operation. A week later he again tried to seize the stone, succeeded in catching it with a grasp of about three-quarters of an inch in diameter, crushed it, and after that broke up the separate fragments without difficulty, removing them with the evacuator. The patient made a good recovery. On examining the fragments he found that the stone was a round, flat one, and this was probably the reason why he failed to grasp it with the lithotrite at the previous operations.

CALCULUS REMOVED FROM THE BLADDER OF A WOMAN BY LITHOLAPAXY.

DR. LITTLE also presented fragments of a stone which he removed from the bladder of a woman, sixty-five years of age, accompanied by the following history furnished by Dr. William R. Larkin, acting house-surgeon to St. Vincent's Hospital.

Her father passed at frequent intervals small phosphatic calculi per urethram. The rest of the family were always very healthy. The patient states that she has always been healthy until two years ago, when she began to experience some difficulty in voiding her urine, especially in cold or inclement weather. The urine passed was slightly turbid, and gradually grew more and more cloudy. Twelve months ago she had acute retention, necessitating catheterization. Three months ago she had a second attack, which was relieved by the catheter, and since that date she has had her urine drawn at frequent intervals. Since her second acute attack of retention she has passed blood and an abundance of mucus. She states that when she first noticed the trouble caused by urination, two years ago, she had also frequent attacks of severe lancinating pain, especially marked and intensified on micturition. The pain was referred to the bladder, and radiated down the thighs to the knees, and had gradually increased in intensity so that the patient dreaded to pass her water. On admission to St. Vincent's Hospital the patient looked "careworn," face pale, pulse rapid, but strong, her appetite and general condition quite poor, and she suffered from loss of sleep. On examination, a vesical calculus, rather large and somewhat soft, was found. A day was appointed for its removal, but, in the meantime, a painful carbuncle appeared on the right buttock, in consequence of which the operation was postponed. On April 5th the patient was anæsthetized and litholapaxy successfully performed. No difficulty was found in seizing the stone. A short lithotrite (Thompson's) belonging to Dr. George A. Peters was used. This was much easier managed than the long instrument for the male bladder. A straight evacuating catheter, No. 29 French, was introduced, and the fragments removed by Bigelow's evacuator. Before introducing the catheter, the urethra was slightly dilated by means of Dr. S. D. Powell's four-bladed dilator. After the operation the bladder was thoroughly washed out with a solution of boro-salicylic acid, and the patient put to bed. The subsequent progress of the case was entirely favorable. Two weeks after the operation the patient left the Hospital, free from all symptoms, and having complete control over her bladder.

DR. KEYES said that he had, in several instances, experienced difficulty in attempting to pick up a small, flat stone with an instrument having the double curve of Bigelow. He thought it was impossible with the patient in position to pick up a small, flat piece of stone from the floor of the bladder with a lithotrite that has a double curve in cases in which the *bas-fond* of the bladder is deep and precipitous. He had had constructed an instrument without the extra curve in the female blade and in which the blades came very close together at the tip, with the female blade very thin, and with which he had been able to pick up a thin piece of stone from the floor of the bladder as well as from any other place. In

cases of very large prostate symmetrically developed, and a fairly large calculus, an instrument with the extra curve may be of some advantage.

DR. LITTLE said that the stone was finally seized with a Thompson's lithotrite without the double curve. He also stated that at the first two attempts he was unable to seize, or even to find the calculus. This case also illustrated what he had seen in several cases in which the patient was suffering from symptoms due to enlargement of the prostate as well as from stone, that the manipulations necessary to the operation of litholapaxy relieve the prostatic symptoms. In this case, the patient's symptoms were greatly improved by the attempts to find the stone. This, he thought, was explained by the dilatation of the urethra and the neck of the bladder, by the introduction of the evacuating catheters and the large lithotrite, and the thorough washing out of the bladder. In a case on which he operated last spring, at Woodstock, Vermont, the patient, a man, seventy-seven years of age, had enlarged prostate, and had been compelled to use the soft catheter every hour for nearly three months. Immediately after the stone was removed, which was a large one, measuring one inch and a quarter in diameter, he was able to hold his water for three hours, and on the third day he held it for six hours and passed it without the aid of a catheter. This condition lasted for over two months, the prostatic symptoms then reappeared, and the use of the catheter again became necessary.

DR. BRIDDON had seen two cases of impacted calculus in the urethra. The first occurred in his service in the New York Dispensary, and in a child two years old. The patient had symptoms of retention of urine, and the bladder was distended upwards to a point midway between the pubes and umbilicus. A catheter was introduced, and the sensation of passing over a foreign body was experienced in the deeper portion of the urethra, but the instrument entered the bladder and emptied it, and then came in contact with a stone. He appointed the following day for an operation, and the late Dr. Buck was present to assist. Dr. Briddon retracted the foreskin and discovered that there was a calculus in the urethra and it was removed. On introducing the staff into the bladder, another calculus was touched, and was removed by perineal incision.

The second case occurred in a child one year old, in his service in the Presbyterian Hospital, within the last year. Retention had occurred two or three times before admission, and when he saw the patient retention was quite pronounced. On the introduction of the catheter, a foreign body was found in the deeper urethra, but there was no difficulty in passing the instrument beyond the obstruction. In that case he cut the child on the following day, and removed a small calculus.

Dr. Briddon also referred to the case of a man in whose bladder he found a calculus with a cockspur projection, which he broke off with his finger, and after that was able to feel the remaining portion of the calculus in a sac in the bladder, but was unable readily to get it out. After considerable exertion with a small scoop, he succeeded in tilting the calculus out, which was about the size of a filbert. The man returned within the last two or three weeks to the Presbyterian Hospital with another calculus in the bladder. He performed litholapaxy, but had considerable difficulty in catching the stone. He was at work with the instrument in the bladder at least three-quarters of an hour, but no reaction whatever followed the operation.

SECONDARY HEMORRHAGE FOLLOWING FRACTURE WITHOUT INJURY TO THE ARTERY BY THE BONE.

DR. L. A. STIMSON reported a case of secondary hemorrhage following fracture without direct injury to the artery, occurring in the case of a man, twenty-five years of age, who was admitted to Bellevue Hospital about the middle of March with fracture of the right leg caused by being run over by a horse-car. The fracture was at the junction of the lower with the middle third, and there was considerable laceration of the integument upon the anterior portion of the leg. The bleeding at the time of his admission was slight. The wound was cleaned with the corrosive sublimate solution and thorough drainage adopted. On the eighth day after admission a profuse hemorrhage occurred, and the patient died a few hours afterward. At the autopsy, on exposing the anterior tibial artery, he found a ragged opening on its anterior surface one-third of an inch long, and situated an inch and a quarter above the line of fracture, and immediately above this large, ragged opening there was a small pin-hole opening; there was no clot in the vessel, the bone did not press upon it, and there was but little inflammation about it. The posterior tibial artery was thickened and discolored at the same level, and apparently undergoing an inflammatory process which might have terminated in thrombosis or ulceration, as the anterior vessel had done, if the patient had lived longer.

DR. MARKOE said that, at one time, he took pains to collect a number of cases of secondary hemorrhage after fracture, and in all of them, thirteen in number, he found the wound had been manifestly caused by the rubbing of the sharp edge of the bone, either of the fracture or of a necrosed portion, against the surface of the artery.

DR. STIMSON remarked that in his case there was no possibility of injury occurring from either of these causes.

FIBRO-SARCOMA OF THE KNEE-JOINT.

DR. MCBURNEY presented, in behalf of Dr. Weir, a small tumor which had been removed from the knee-joint, where it simulated a loose cartilage, and was attached by a long pedicle. The tumor measured one and a half by one inch. It was submitted to Dr. Peabody for microscopical examination, who made the following report:

"I have found no reason to change my mind regarding your knee-joint mass, and would only add that the spindle cells are so few in proportion to the fibrous tissue that I should suppose the prognosis would be rather that of a fibroma than of a sarcoma."

NEWS ITEMS.

GOVERNMENT QUARANTINES are now open at Ship Island, Miss., in the Gulf, and at Sapalo, off the coast of Georgia, the former under the charge of Surgeon Robert D. Murray, of the Marine-Hospital Service, and the latter under Acting Assistant Surgeon George H. Stone, stationed at Savannah, with Acting Assistant Surgeon

Brunner at the Station on Blackbeard Island, Sapalo Sound. The Cape Charles Quarantine Station, on Fisherman's Island, Chesapeake Bay, will be opened on the 15th instant, Passed Assistant Surgeon Fairfax Irwin, U. S. Marine-Hospital Service, in charge.

YELLOW FEVER AT RIO.—The yellow fever is on the increase at Rio; according to consular reports there were 28 deaths for the week ending March 15th, and 42 deaths from this disease for the week ending March 22d.

CHOLERA AT CALCUTTA.—Reports from Calcutta show an increase in cholera deaths, 51 having occurred during the week ending March 8th, and 95 deaths during the week ending March 15th.

THE HOMŒOPATHIC BILL before Congress, which is being pushed by its friends, has had several petitions presented in its favor during the past week; Senators Pendleton, of Ohio, Sawyer, of Wisconsin, Blair, of New Hampshire, and Colquitt, of Georgia, each presented petitions from citizens of their respective States, praying Congress for the passage of Senate bill 1223, making all qualified physicians equal before the law. For the benefit of our readers who may wish to know more about this bill, we herewith give its full text:

"S. 1223. A bill to secure to the medical profession equal rights in the service of the United States.

"*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

"That all appointments to medical service under the Government shall be made from graduates of legally chartered medical institutions, without discrimination in favor or against any school or theory of medical practice.

"Sec. 2. That any violation of the foregoing section shall be punished in the same manner as prescribed for like offences by the Act entitled, 'An Act to regulate and improve the civil service of the United States,' approved January sixteenth, eighteen hundred and eighty-three."

Read twice and referred to the Committee on Civil Service and Retrenchment.

ARMY MEDICAL OFFICERS.—The Senate has just passed a bill defining the title and duties of certain officers of the Medical Department of the Army. It prescribes that the six officers of that department having the rank of Colonel, shall be styled Assistant Surgeons-General; and the officers with the rank of Lieutenant-Colonel, shall be styled Deputy Surgeons-General. The rank and pay of all to remain as at present.

A COMPLIMENTARY DINNER TO PROF. ALFRED STILLÉ, M.D.—On behalf of the medical profession of Philadelphia, the following letter was addressed recently to Dr. Stillé:

DEAR DR. STILLÉ:

The undersigned members of the Medical Profession of Philadelphia, having learned with sincere regret that you are about to retire from the Chair of Medicine in the University of Pennsylvania, which you have adorned for so many years with so much honor to yourself, and so much credit to that venerable institution, and highly appreciating your dignified course as a professor, the valuable services which you have rendered to the progress of medical education and medical science, and your scholarly attainments as a writer, beg, as a fitting expression of their friendship and esteem, to tender you a public dinner, to be given at such time as may be most agreeable to yourself.

We have the honor to be, very truly, your friends,

(Signed), S. D. Gross, J. M. Da Costa, Albert H. Smith, D. Hayes Agnew, W. S. W. Ruschenberger, William Pepper, Roberts Bartholow, Samuel Lewis, Ellwood Wilson, James H. Hutchinson, J. Ewing Mears, J. H. Brinton, S. W. Gross, I. Minis Hays, R. A. Cleeman.

To this letter the following reply was received:

GENTLEMEN:

You have honored me with an invitation at once the most flattering to my professional pride and to my personal feelings that it was ever my good fortune to receive.

Some among you have had occasion to observe my public career, and others to judge of its quality and fruits. I may, therefore, well be proud of its receiving so cordial an approval from you, as well as grateful for the friendship of gentlemen who so conspicuously adorn the medical profession.

It will afford me great pleasure to meet you in the manner you propose, at any time that may be most convenient to yourselves.

I remain, with great respect, very sincerely yours,

ALFRED STILLÉ.

The dinner will be given at the Hotel Bellevue, on Thursday evening, May 22.

HARVARD UNIVERSITY.—Dr. Robert T. Edes has been appointed to fill the Chair of Clinical Medicine in Harvard University, made vacant by the death of Dr. Calvin Ellis.

GIFT TO BELLEVUE HOSPITAL MEDICAL COLLEGE.—Mr. Andrew Carnegie, one of the trustees of this school, has recently given the sum of fifty thousand dollars to the college, to be expended in the erection of a building, and in apparatus for laboratories for practical work and teaching in everything relating to microscopical and experimental research in the different departments of medicine. The building will belong to the Bellevue Hospital Medical College, but the advantages pertaining thereto will not be restricted to the students connected with the college; they will be open to students connected with other schools and to members of the medical profession throughout the country. It is believed that there is now no distinct building in this country on so large a scale as that which it is proposed to erect exclusively devoted to the same object.

CHICAGO MEDICAL COLLEGE.—Dr. W. W. Jaggard has just been elected Adjunct Professor of Obstetrics in this institution.

THE DWIGHT LIFE INSURANCE CASE.—We are requested to state that the Ætna Life Insurance Company of Hartford, which recently paid the amount of Col. Dwight's life insurance policy issued by them, was not a member of the combination of companies formed to contest the claim of the Dwight heirs. This combina-

tion, we are informed, is still firm in its determination to contest the claim.

PENNSYLVANIA HOSPITAL.—DR. D. HAYES AGNEW has recently resigned his position as Surgeon to this Hospital, and the vacancy has been filled by the election of DR. JOHN H. PACKARD.

SALE OF IMPURE ICE ILLEGAL IN CONNECTICUT.—The following bill, introduced by the State Board of Health of Connecticut, has been passed by both branches of the Legislature: "Any person who shall self, or offer to sell, for family or hotel use, any ice cut or taken from a pond or lake into which any sewer empties, or from such part of any river or other stream as is below and within two miles of the outlet of any sewer entering the same, shall be fined fifty dollars for each offence."—*Sanitary Engineer*, March 27, 1884.

ALABAMA STATE MEDICAL SOCIETY AND THE NEW CODE.—At the annnal meeting of the Alabama State Medical Association, held at Selma, on April 9th, the following resolutions, introduced by Dr. W. O. Baldwin, of Montgomery, were adopted:

Resolved, That the members of the Medical Association of the State of Alabama have watched with deep interest the progress of the struggle, which for the past two years has been going on in the New York State Medical Society, between the advocates of the ancient and established ethics of the medical profession, as embodied in the Code of Ethics of the American Medical Association, as heretofore recognized and observed by all physicians of reputable standing in all the countries of the civilized world on the one hand, and on the other hand the advocates of the so-called "New Code," or New York Code, which in effect proposes to degrade the medical profession by opening the way for professional association with irregulars and charlatans.

Resolved, That all hope of the prevalence of wise and conservative counsels in the New York State Medical Society having been dissipated by its action at its recent session in Albany, no honorable course was left for the adherents of the established ethics except that which they have chosen to pursue, namely, to separate themselves from the demoralizing movement which they were unable to control, and to organize themselves into a new Association for the maintenance of the honor and dignity of the profession in their State.

Resolved, That in doing this, these gentlemen, Flint, Jr., Gouley, Didama, Squib, Rochester, Flint, Sr., Sayre, Fox, and their associates have earned for themselves the thanks of the medical profession of the whole country, and we extend to them our congratulations and fraternal good will.

Resolved, That in order still further to signalize our appreciation of their recent action, a copy of these resolutions with the greetings of this Association be forwarded by our President to Dr. H. D. Didama, of Syracuse, the President-elect of the New York State Medical Association, wishing them prosperous fortunes and abundant success in the further development and fruition of their noble work.

Resolved, That a copy of these proceedings be also forwarded to THE MEDICAL NEWS, with a request that they be published.

DR. MORELL MACKENZIE'S NEW EDITION ON DISEASES OF THE THROAT AND NOSE.—A great fire recently occurred in the city of London, in which the premises of Messrs. Pardon & Sons, who have long been concerned with the printing of medical books and journals, suffered severely. Amongst other losses we learn that the entire edition of the long-promised second volume of Dr. Morell Mackenzie's work on *Diseases of the Throat and Nose* has been destroyed. Fortunately it will be possible to reprint the book from proof-sheets in the possession of the author, but the publication will necessarily be delayed for some months.

RECENT SANITARY LEGISLATION IN NEW JERSEY.—The Legislature of New Jersey has given increased powers to local Boards of Health by permitting them to pass ordinances for the following purposes:

To regulate and control the method of construction, the location, the method or manner of emptying and the time or frequency of cleansing of all cesspools and privy-vaults; to regulate house drainage and connection with sewers and cesspools; to protect the public water supply and to prevent the pollution of the same, and to close any well the water of which is dangerous to health; to remove to a suitable place persons sick with any contagious disease; to regulate the burial and disinterment of human bodies. These powers are in addition to those already given by the law of 1882.

OBITUARY RECORD.—WILLIARD PARKER, M.D., LL.D., died at his residence in New York City, on Friday, April 26th. For more than a year he had suffered from pyelitis. On April 13th he had a stroke of paralysis with aphasia, and his death was not unexpected.

Dr. Parker was born in Hillsboro, N. H., on September 2, 1800. On both sides he was descended from English Puritan blood. Being the oldest child of his parents, much of his time was spent working on the farm until he was nineteen years of age, thus giving him an amount of physical vigor which has stood him in good stead for many years. While thus working he was reading and studying in his leisure, and he prepared himself to teach school, which he commenced on leaving the farm at nineteen. At the same time he prepared himself for college, and entered Harvard University, from which he graduated in 1826. During his first year at Harvard an incident occurred which turned his attention to surgery. His chum happened to have a strangulated hernia, which the surgeon of the town was unable to reduce. Dr. John C. Warren, then Professor of Surgery in Harvard, was called in, and his facility in diagnosticating and reducing it so impressed young Parker that he immediately resolved to study medicine. On graduating from Harvard he entered the offices of Drs. Warren and Townsend as a medical student. In the spring of 1827 he received the appointment of House Physician in the U. S. Marine Hospital, at Chelsea, where he remained about two years. In the winter of 1828–9 he became the private pupil of Dr. John C. Warren, whose lectures he had attended for two years, The office of House Surgeon having been just created in the Massachusetts General Hospital, the position was offered to young Parker, who accepted it, serving for about a year, and attending lectures at the same

time. In February, 1830, he received his degree of Doctor in Medicine. Previous to his graduation he delivered, during the summer of 1829, a course of lectures upon anatomy in the Medical School at Woodstock, Vt. In June, 1830, he was appointed to the Chair of Anatomy in the Berkshire Medical School, at Pittsfield, Mass., while he continued his lectures at the Woodstock School. In 1832, a vacancy having occurred in the Chair of Surgery in the Pittsfield School, Dr. Parker was appointed to it, thus delivering two lectures daily. In 1836 he accepted the Chair of Surgery in the Cincinnati Medical College, but soon afterwards went abroad and spent some time in the English and French Hospitals. Returning to America he intended to make Cincinnati his home, but was compelled to leave the West on account of the injurious effect of the climate upon his health. In 1839 he received the appointment to the Chair of Surgery in the College of Physicians and Surgeons, New York City, and it was this appointment which enabled him to initiate the system of college clinics in America. Appreciating the want of practical demonstration in teaching surgery, and holding at the time no hospital position, he visited, with the students, two of the city dispensaries. Soon afterwards interesting cases were selected and taken from the dispensaries to the college, where, in the amphitheatre, superior advantages were offered for making diagnoses and performing operations before the class.

In 1845, the City Almshouse, now Bellevue Hospital, was reorganized under a board of governors, and Dr. Parker and the late Dr. James R. Wood were appointed visiting surgeons. Ten years afterwards, in 1856, he was appointed visiting surgeon to the New York Hospital. During these ten years his abilities as a daring and skilful, yet conservative and prudent surgeon, and his wisdom and foresight in diagnosis, had become rapidly recognized. In 1865, on the death of Dr. Valentine Mott, the President of the State Inebriate Asylum at Binghamton, Dr. Parker was appointed his successor, and to this institution he devoted much time and thought. In 1870, he resigned his Chair in the College of Physicians and Surgeons, becoming Emeritus Professor of Surgery; and in the same year he received the degree of LL.D. from Princeton College.

Although Dr. Parker's professional work was not in any special field of medicine, he had his preferences. On one occasion, being asked what these were, he replied:

"Medical treatment and diagnosis as associated with surgical cases. If a man does not familiarize himself with different remedies and their applicability to certain special disorders resulting from surgical cases, he degenerates into nothing more or less than a butcher. It is the glory of the profession to save a limb. But that which I particularly regard as beautiful in its results and satisfactory in its issues is the cutting down for and ligating arteries."

He was the first to point out the distinction between "Concussion of Nerves" and "Concussion of Nerve-Centres." Among his contributions to surgery are cystotomy for chronic cystitis, and the operation for abscess of the appendix vermiformis. His operation for the relief of laceration of the perineum through the sphincter was an important contribution to the surgery of this affection. He ligated the subclavian artery five times, and was the first, in America, to ligate the common carotid and vertebral arteries, in this operation, to prevent hemorrhage by anastomosis.

As a teacher, Dr. Parker had a high reputation and marked success. With a fine personal presence, and a courteous and affable manner he won the personal regard of his pupils, and at the same time riveted their attention by his lucid style and by the simple, commonsense character of his operations and general treatment. Dr. Parker left no works on medicine; the reports of his cases even were made by others. His time was so fully occupied with his lectures and the demands of an immense private practice, that he found no time for writing.

He was consulting surgeon to the New York, Bellevue, St. Luke's, Roosevelt, and Mount Sinai Hospitals, and to the Home for Ruptured and Crippled. He leaves a wife, a son, Dr. Willard Parker, Jr., and two daughters.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending April 19, 1884, indicate that inflammation of the brain, pneumonia, and erysipelas have increased, and that remittent fever, diarrhœa, and intermittent fever have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending April 19, and since, at eight places, scarlet fever at twenty-three places, and measles at seven places.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 22 TO APRIL 28, 1884.

PORTER, JOSEPH Y., *Captain and Assistant Surgeon.*—Granted leave of absence for two months, to take affect about May 5, 1884.—*Par. S. O. 38, Headquarters Division of the Missouri*, April 19, 1884.

BIART, VICTOR, *Captain and Assistant Surgeon.*—Granted leave of absence for one year on surgeon's certificate of disability, with permission to leave the Division of the Missouri.—*Par. 2, S. O. 91, A. G. O.*, April 19, 1884.

LA GARDE, LOUIS A., *Captain and Assistant Surgeon.*—Granted leave of absence for one month, with permission to apply for two months' extension.—*Par. 1, S. O. 91, A. G. O.*, April 19, 1884.

NEWTON, R. C., *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Fort Sill, Indian Territory, and ordered to Fort Elliott, Texas, for duty.—*Par. 1, S. O. 77, Headquarters Department of the Missouri*, April 14, 1884.

CHAPIN, ALONZO R., *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Fort Douglas, Utah, and ordered to Fort Laramie, Wyoming, for duty.—*Par. 2, S. O. 33, Headquarters Department of the Platte*, April 15, 1884.

COFF, JOHN VAN R., *Captain and Assistant Surgeon.*—To be relieved from duty at Alcatraz Island, California, and to report to the Commanding Officer at Fort Mason, California, for duty as Post Surgeon.—*Par. 3, S. O. 45, Headquarters Department of California*, April 16, 1884.

BARROWS, C. C., *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Fort Grant, A. T., and ordered to report for duty at Whipple Barracks, A. T., relieving First Lieutenant W. E. Hopkins, Assistant Surgeon, who, upon being relieved, will report for duty as Post Surgeon at Fort Grant, A. T.—*Par. 1, S. O. 31, Headquarters Department of Arizona*, April 21, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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AMERICAN MEDICAL ASSOCIATION.

THIRTY-FIFTH ANNUAL MEETING, WASHINGTON, 1884.

THE PRESIDENT'S ADDRESS.

Delivered May 6, 1884.

BY AUSTIN FLINT, M.D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE AND OF CLINICAL MEDICINE IN BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

GENTLEMEN: The American Medical Association has reached an age when the thoughts of one whose retrospections extend to its birth naturally revert to the natal period of its existence. Of those who coöperated in the formation of the Association, not many now remain, and after a few more annual meetings all will have passed away.

Thirty-eight years ago, a medical convention was held in the city of New York, in compliance with a recommendation by the Medical Society of the State of New York in 1845. In 1839, the Medical Society of the State of New York adopted a resolution recommending a national convention to be held in Philadelphia in 1840. This action of the Society was without effect. In connection with the recommendatory resolution adopted in 1845, a committee of three was appointed to carry the resolution into effect, and the mover of the resolution, Dr. N. S. Davis, was made chairman of that committee. Thanks to his zeal and energy, at the time and place designated by the Medical Society of the State of New York, the convention was held, and attended by about one hundred delegates, representing medical colleges and societies in sixteen States of the Union. I can bear testimony, from personal recollection, to the enthusiasm which characterized that convention. The convention resolved that it was expedient to form a national medical association, and a committee of seven was appointed to report a plan of organization at a second convention, to be held in Philadelphia, in May, 1847. A committee of seven was appointed to report, at the same time and place, a uniform and elevated standard of requirements for the degree of M.D.; another committee of seven was appointed to report on a suitable preliminary education for the study of medicine; and a committee of seven was appointed to report a code of medical ethics.

At the convention held in Philadelphia in May, 1847, there were present two hundred and fifty delegates—forty medical societies, twenty-eight medical colleges, twenty-two States of the Union, and the District of Columbia being represented. I can testify to an enthusiasm even greater than at the first convention. Resolutions reported by the several committees appointed at the New York convention were adopted. These resolutions embraced a plan of organization, a constitution, and by-laws, together with the now existing code of medical ethics, and the convention was merged into the American Medical Association. Thus, the birth of the Association was in 1847, and it therefore now enters upon the thirty-eighth year of its existence.[1]

What motives led to the formation of the Association? First, and most prominent, was a desire to promote improvements in medical instruction, and to advance the standard of professional acquirements. These were the aims stated in the call for the first convention. A more comprehensive statement was expressed in the first of a series of resolutions prepared by Alfred Stillé, and offered by Isaac Hays, as follows: "It is expedient for the Medical Profession of the United States to institute a National Medical Association, for the protection of their interests, for the maintenance of their honor and respectability, for the advancement of their knowledge, and the extension of their usefulness." It had become evident that for the ends expressed in this resolution the profession in this country must rely mainly on itself. Little was to be expected from State Legislatures. These bodies then, as now, were indisposed to legislate in behalf of medical education, except to charter new colleges; they were even reluctant to legalize dissections; they had not then, nor have they since the formation of the Association, recognized the promotion and diffusion of medical knowledge as legitimate objects for ample appropriations of public funds. As a rule, so far as legalized protection, sanction, and encouragement go, they have been not less considerate of irregular than of regular medical practice; and, indeed, the terms regular and irregular denote a purely professional, not a legal, distinction. The State of New York, at the time of the first convention, had, virtually, admitted the right of any one to practise medicine; in few, if any, of the States of the Union were there legal restrictions, and in some there were no laws whatever relating to medical practitioners. Nor was much to be expected then, as now, from individuals outside of the profession. Liberality, philanthropy, and public spirit had not, and as yet have not, except in rare instances, taken a direction towards medical instruction and the advancement of medical knowledge. A conviction of the necessity for self-reliance, and a deep sense of the importance of the ends set forth in the resolution which I have quoted—these were the mainsprings in the movement which resulted in the organization of the American Medical Association. The need for uniting in council members of the profession from all parts of the country was widely felt. The feeling was catholic, not sectional. The ends had reference, not to a single State, but to the United States. When Davis introduced his resolutions at the meeting of the Medical Society of the State of New York, in 1845, the "fulness of the time had come," and, in the providential order of human

[1] The annual meetings were suspended from 1860 to 1863, that is, for the years 1861 and 1862. The suspension of the meetings for these two years was owing to the civil war. It is worthy of note that the Medical Society of the State of New York, in February, 1863, adopted unanimously a resolution in favor of resuming the regular annual meetings of the Association.

events, the American Medical Association came into existence. Its development and growth were rapid. It has now passed through a healthful adolescence into a mature age. It has outlived, and profited by, the errors and imperfections incident to youth. We have before us to-day the proof that it is replete with vitality and vigor.

I have not indulged in these reminiscences of the origin of the Association with an intention to review its subsequent history. As furnishing appropriate topics for my discourse on this occasion, I take for my text the preamble to the plan of organization adopted at the formation of the Association. This preamble is as follows:

"Whereas, the medical convention held in the City of New York in May, 1846, have declared it expedient for the medical profession of the United States to institute a National Medical Association, and inasmuch as an institution so conducted as to give frequent united and emphatic expression to the views and aims of the medical profession in this country, must at all times have a beneficial influence, and supply more efficient means than have hitherto been available here for cultivating and advancing medical knowledge; for elevating the standard of medical education; for promoting the usefulness, honor, and interests of the medical profession; for enlightening and directing public opinion in regard to the duties, responsibilities, and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those who are engaged in it; therefore, be it resolved, in behalf of the medical profession of the United States, that the members of the Medical Convention held in Philadelphia in May, 1847, and all others who, in pursuit of the objects above mentioned, are to unite with, or succeed them, constitute a National Medical Association."

The objects of the Association are here clearly and tersely set forth. My remarks will have reference to these objects. The topics which in connection therewith suggest themselves, are so many and large that, with a due regard to the length of my discourse, not a few must be omitted, and none can be fully considered.

The terms "cultivating and advancing medical knowledge," by which the first object is expressed in the preamble, imply that medicine is progressive. No one of those whom I address will deny the assertion that medicine is now progressing, as it has progressed in the past, and that it will continue to progress in the future. I do not doubt that the present stage of its progress will hereafter be cited as an important epoch in its history. For the past quarter of a century, histological and clinical studies have tended to develop more and more our knowledge of the existence of specific agents in the causation of diseases. That, as regards certain diseases, these specific agents are microörganisms, has been demonstrated. The latest discovery in this direction is that of the bacillus tuberculosis, a discovery which is the leading topic in medical literature at the present time. Recent trustworthy researches go far toward demonstrating the existence of specific organisms in pneumonia, typhoid fever, malarial fever, and epidemic cholera; and, reasoning by analogy, it is a logical conclusion that ere long a host of diseases will be proven to be parasitic. It is easy to perceive how important must be the bearings of these developments in etiology and pathology on prophylaxis and therapeutics.

A new era is about to be inaugurated in these practical departments of medicine. Prof. Huxley, in his address at the International Medical Congress in 1881, uttered a prediction in these words: "It will become possible to introduce into the economy a molecular mechanism which, like a very cunningly contrived torpedo, shall find its way to some particular group of living elements and cause an explosion among them, leaving the rest untouched." I would rather say that the time will come when means will be found to destroy morbific agents outside of the body, thereby securing the prevention of diseases; and that means will be found to effect the destruction of these agents within the body, thereby arresting the course of diseases. Let us hope that the medical profession in this country will take an honorable part in labors for the cultivation and advancement of medical knowledge with reference to these most desirable results! At all events, let us continue to recognize and apply medical knowledge wherever it may originate!

"For elevating the standard of medical education;" these terms express the second of the objects enumerated in the preamble. At the first convention, held in 1846, a committee was appointed to report on "a uniform and elevated standard of requirements for the degree of M.D., to be adopted by all the medical schools in the United States." Another committee at the same convention was appointed to report on the "standard of acquirements which should be expected of young men before being received as students of medicine." These committees, at the second convention, in 1847, submitted reports which were adopted. Now, it has been charged upon the Association that its recommendations in regard to medical education have been nugatory. If, however, the recommendations embraced in these reports be referred to, it will be seen that there is less room for reproach than some may have supposed.

The committee on the requirements for the degree of M.D. reported, in substance, as follows: That the college terms be extended from four to six months; that candidates for the degree of M.D. shall have attended two full courses of lectures before graduation; that three years should be devoted to the study of medicine; that a certificate of pupilage by a preceptor who is avowedly and notoriously an irregular practitioner should not be accepted; that the number of professors in medical schools be increased to seven; that candidates shall have devoted three months to dissections; that preceptors should avail themselves of every opportunity to impart clinical instruction to their pupils.

It would be absurd for the Association to renew these recommendations at the present time. The progressive advancement in medical instruction in most of our colleges has long since gone far beyond them. It is not to be doubted that the Association exerted not an inconsiderable influence in the progress which has been made in medical instruction. That there is room for further advancement, no one will deny, and it is certain that it will continue in the future as in the past, albeit not, perhaps, with a celerity to satisfy those who seem to derive gratification from the disparagement of medical education in this country. Improvements which, al-

though steadily progressing, are to be promoted, relate to a closer union of didactic with clinical teaching, and especially to practical exercises in the investigation of cases of disease; to increased demonstrative instruction in special branches of medicine, such as histology, the microscopical and chemical examinations of morbid products, together with the fluids of the body in health as well as in disease, the physical exploration of the lungs, heart, and other organs, etc.; to a larger allowance of time in connection with oral teaching for recitations; to the substitution of recitations, to a greater or less extent, for didactic lectures in certain departments, and to an extension of the period of medical pupilage.

The educational advantages, exclusive of those relating to college sessions, although vastly better now than heretofore, may be much extended and made more available than at present. The pupils who, between college sessions, study in the offices of medical practitioners in the country, reading such books as they find in the meagre, and perhaps antiquated libraries of their preceptors, accompanying the latter in their "rides," preparing medicines and making themselves generally useful, may undoubtedly pick up many facts and ideas which will become useful in after-life, but it hardly requires argument to show that systematic private instruction is much to be preferred. Moreover, methodical reading and recitations are essential, not only for the information thereby obtained, but in order that the pupil may acquire, if it have not been already acquired, what may be called the art of study. There are those who, having obtained their medical education chiefly from oral teaching and demonstrations, cannot apply the mind to study by means of books, although not indifferent to the knowledge to be thus obtained, for the simple reason that they lack the ability to be acquired only by practical training.

At the present time the most important of the means for elevating the standard of medical education relate to the preliminary requisites for the study of medicine. The committee appointed in 1846 to report on this subject, recommended that members of the medical profession throughout the United States should satisfy themselves before receiving young men as students, that they have acquired "a good education, a knowledge of natural philosophy, and the elementary mathematical sciences, including geometry and algebra, and such an acquaintance, at least, with the Latin and Greek languages as will enable them to appreciate the technical language of medicine, and read and write prescriptions." It was also recommended that the medical colleges require a certificate of such an amount of preliminary acquirements before matriculation.

These requisites are, assuredly, neither in number nor degree, unreasonable. The need of any knowledge of the dead languages has been doubted, but when it is considered that the names of all the organs and tissues in the body, and the nomenclature of diseases, together with the terms used in physiology, chemistry, materia medica, pharmacy, surgery, and obstetrics, are of either Greek or Latin derivation, it is difficult to understand how the student can dispense altogether with this knowledge. The want of it must, to say the least, be a great drawback. A thorough acquaintance with these languages, philologically, or with reference to the appreciation of the literature of Greece and Rome, however elegant as an accomplishment, is by no means essential as preparatory for the study of medicine, and it may fairly be questioned whether the time usually spent in the study of the Greek and Latin authors by those who graduate in arts at our colleges, might not be given with much more profit to physics, chemistry, and the French and German languages. To the requisites recommended by the Association, might be added, with advantage, knowledge of the elements of chemistry, leaving only the practical application of this science in the different departments of medicine to be taught in our medical schools.

It must be confessed that the progress in the matter of the preliminary education of medical students, is less satisfactory than that in medical instruction. Not a few medical students are deficient in the knowledge and the mental training requisite as preparatory for the study of medicine. The fault, exclusive of the students themselves, lies in part with the medical schools, and partly with private preceptors—more with the latter, inasmuch as to them generally applications are first made to enter upon the study. I have no wish to be an apologist for either; there is blame on both sides, and there should be mutual coöperation in an effort to remove the greatest of the present obstacles in the way of elevating the standard of medical education.

The practical question is, what can the Association do to promote more and more the elevation of the standard of medical education? I will meet this question, in the first place, by suggesting what it is desirable should not be done.

It is not judicious to decry medical instruction in this country as unworthy of any commendation, and as contemptible when contrasted with the educational advantages of other countries. The low estimate in which medical education in America appears to be held by some of our writers, is not only discouraging, but it is without any warrant from facts. Our methods of teaching have certain notable advantages above those of other countries; and in respect of effectiveness in practical branches, we have no occasion to be ashamed if comparisons be fairly made.

It is alike impolitic and unjust to depreciate, as is sometimes done in offensive terms, the medical profession of the United States. As a body, the members of our profession in this country are neither ignorant nor in any respect unworthy. The profession is honorable and honored. In no other country is the social status of its members higher. If a distinction be not always drawn, in public estimation, between true merit and either pretentious ignorance or fraudulent assumption, this is an evil by no means confined to our country; it is incident to the peculiar character of medical knowledge and to human credulity. Granting the need of a better average of professional acquirements, it is not to be effected by abuse of the profession as a whole.

Sweeping charges against medical schools of venality and deception, are not less unwise than unbecoming. As regards their maintenance, the condition of the medical schools in this country, when compared with those of other countries, is anomalous. For the most part they are unendowed, and, therefore, must be self-sustaining. If they cannot offer adequate inducements for patronage, they cannot exist. This condition has its advantages, but also its drawbacks. There is but little

ground for the accusation of resorting to dishonorable methods to secure patronage. I may venture to assume some degree of competency to speak with confidence in regard to this matter, it having fallen to my lot to have been connected with several medical colleges, and I aver my belief that the endeavor to entice students by an expectation of easy graduation, or by any other disreputable inducements, must be rare exceptions to the rule. Granting that there are exceptions, and that some colleges may be guilty of flagrant abuses of their chartered rights, is it not more just, and in all respects better, to pursue measures for the extinction of their rights, or for rendering their degrees nugatory, than to make the evil doings of a few, the ground for indiscriminate abuse, embracing colleges which are striving to do their duty to their pupils, to the medical profession, and to the public?

It is injurious and an injustice to assert, as is often done, that a large proportion of those pursuing the study of medicine in this country are governed by a desire to gain admission to the profession as quickly, as cheaply, and with as little medical knowledge as will suffice for that object. Here it may not be too presuming in me to speak with some authority, having, as a teacher for forty years, been brought into relations with many thousand medical students, from the northern, southern, eastern, and western States of the Union. As a class, they will compare favorably with those preparing for the sister professions, or for any of the callings of life. A large proportion evince a degree of diligence and perseverance not excelled, as I believe, in any other country. I rejoice in the present opportunity to bear this testimony, based on personal knowledge, in behalf of the much and undeservedly abused American medical students.

Elevation of the standard of medical education is not to be promoted by means such as have just been adverted to. Vituperation does not supply motives for improvement. Reforms are not favored by obloquy. He who is content to do battle with the sword of ridicule has not the spirit of a true reformer. I have no disposition to deny or to take the attitude of an apologist for defects and abuses which affect, directly or indirectly, the standard of medical education. Some of the evils most complained of might be obviated by the united action of the members of the medical profession. Much is said respecting the overcrowding of the profession by the large number of annual graduates, and this evil is attributed to the number of medical colleges. Assuming, for the nonce, the fact together with the explanation, and that the evils overbalance the advantages of an active competition among the colleges, how is the number of these to be reduced? Reliance on State legislation would be delusive. Legislators are not likely to take away charters which have been granted, and they will probably continue to be complaisant enough to grant new charters to persistent applicants. But suppose all private perceptors were to induce their pupils not to connect themselves with colleges which are either misplaced or deficient in the means of instruction; a certain number would cease to exist, and the result would exemplify the Darwinian doctrine of the "survival of the fittest."

Again, suppose private perceptors throughout the United States were to unite in declining either to receive as pupils or to advise entering on the study of medicine all who lack the proper requirements; the evil of the deficiency in preliminary education would be at once removed.

I revert to the question, "What can our Association do to promote more and more the elevation of the standard of medical education?" It is to be borne in mind that, exclusive of the motives for personal improvement which appeal to its members individually, the profession must rely upon itself for whatever is to be done. The American Medical Association represents the profession of the whole country. Hitherto the Association has been content with reports, addresses, and communications pointing out existing defects in medical education, and recommending changes and improvements, the immediate adoption of some of which was impracticable. Too often a predominant spirit of animadversion has been apparent. Let a course be pursued which is more active and practical, with reference to measures for progress. Let certain measures be proposed for immediate adoption, which are within the limits of practicability. Let these measures receive the sanction and support of local Associations in the different States of the Union. Let the National Association take the initial steps, and solicit conferences with and the cooperation of State Associations and the leading medical colleges throughout the country, with a view to agreement respecting the proposed definite measures. Let these steps be taken in a kindly spirit with an earnest desire to harmonize different views and interests, in order that there may be united action as regards improvements agreed upon. In this way, as we may hope, uniformity in the different States will be secured in behalf of the second of the objects for which our Association was instituted. There can be but little difference of opinion as to the improvements in medical education which it is desirable should be effected; the opposing difficulties are chiefly those which interfere with uniformity throughout the United States. I venture to suggest the appointment of a standing committee on medical education with a view especially, by means of communications with State associations and colleges, to secure uniform action with reference to requirements for matriculation and for graduation. My purpose in the suggestion of such a committee, is not to obtain reiterated resolutions setting forth what ought to be done, but reports at the next meeting, and at subsequent meetings of the Association, of what has been actually accomplished. It is not to be expected that all desirable improvements will be at once effected. Considering the greater relative importance of preliminary requisites for the study of medicine, were these made the first objective point in the action of the committee with a satisfactory result, a very important advance would be made, and this would be likely to prove an earnest success in effecting other improvements.

A plan for the elevation of the standard of medical education, which has been recommended by the Association, consists in making the degree of M.D. purely an honorary distinction, not rendering the graduate thereby legally qualified to practise, this qualification to be derived from a licensing board, composed of examiners not engaged in medical teaching. Of this plan, I forego discussion, for the reason that it would exclude the consideration of topics which seem to me more im-

portant. With no disposition to undervalue its recommendations, I will simply remark that, aside from certain intrinsic objectionable features, it is open to objection on the ground of the impracticability of securing uniformity in the different States of the Union, and because it contravenes the principle of self-reliance in matters relating to our profession.

In the language of the preamble, the third object of our Association is "for promoting the usefulness, honor, and interests of the medical profession." I shall confine my remarks on this object to a topic which is, perhaps, at the present time, the most important bearing upon it. I refer to medical ethics. I need not undertake to represent to this audience how manifold, delicate, and peculiar are the professional duties and relations of the medical practitioner. There is no other calling in which so much depends on the conscientiousness and uprightness of those who practise it. There is no calling in which the temptations and opportunities for deviations from rectitude are so great. In the enumeration of the attributes of the physician by Hippocrates, with "learning and sagacity" were conjoined "humanity and probity."

In order to practise medicine with proper self-respect, the practitioner himself must honor the profession, and in order that medical services shall be properly respected, the profession must be honored in public estimation. The duties incident to medical practice are often of a nature to render them menial and degrading were they not required by a humane and honorable calling. Some one has said with truth that, while medicine is a noble profession, it is the meanest of trades. Imbued with these sentiments, the founders of our Association, at the convention in 1846, resolved, "That it is expedient that the medical profession in the United States should be governed by the same code of medical ethics, and that a committee of seven be appointed to report a code for that purpose." A committee appointed in accordance with this resolution reported a code of ethics at the convention held in Philadelphia in 1847. This code was adopted by the American Medical Association without a dissenting voice. It has remained essentially intact up to the present time, and it has been adopted by medical societies throughout the United States.

It were gratuitous to expatiate on the excellence of this code. It speaks for itself better than any one can speak in its behalf. It has exerted a most salutary influence on the minds of the members of the medical profession in this country. It has promoted love of the profession, and self-respect as members of it, thereby contributing to its usefulness, its honor, and its true interests. I believe that a former President of this Association, Dr. N. S. Davis, uttered a correct statement in saying that in no other country are the principles and rules of medical ethics better observed than by the majority of the members of the profession in the United States.[1] And it is a reasonable conclusion that this is owing in a great measure to the influence of the National Code on the minds of the practitioners of medicine in our country. I concur with the speaker who addressed the Association from this chair in 1882—Dr. Hooper—in the opinion that the American Medical Association, had it done nothing else than to adopt the Code of Ethics, would have been entitled to unending gratitude. I cannot forbear quoting some extracts from the address of a distinguished predecessor, the late Prof. George B. Wood, in 1856: "A great benefit conferred on the profession by the Association was the preparation and adoption of the Code of Ethics. . . . I have no doubt that a full observance of its rules would tend more than any one thing else to maintain harmony in the profession, and to elevate it in the public esteem. . . . I do honestly believe that to a young physician going forth into a life full of moral conflicts, the wearing of this ægis would be one of his surest defences; that, next to the holy Scriptures and the grace of God, it would serve most effectually to guard him from evil."

It is only within a recent period that there have been, anywhere, manifestations of a disposition to change materially our national Code of Ethics, or to do away with any code. In 1882, at the annual meeting of the New York State Medical Society, by a vote of fifty-two of seventy members in attendance at the meeting, a new code was summarily substituted for the code of the American Medical Association. This precipitate and lamentable action has severed the New York State Society from its affiliation with our Association, and has resulted in a division of the members of the profession in the State of New York. That these results may not be permanent must be the fervent wish of all who have at heart the usefulness, honor, and interests of the medical profession.

Some of the recent opponents of our National Code object to it as antiquated, quaint, and containing useless platitudes. These objections do not call for serious refutation. They involve merely a question of taste; and the characteristics which by some are considered as blemishes, have for others a peculiar charm. Admitting that certain of the precepts of the Code are supererogatory, no one can object to them on the ground that they do harm; and if they be acceptable even to a few, wherefore should they be opposed by any?

Other objections are, that the Code has, to a greater or less extent, proved inoperative, and that its rules are not enforced by means of penalties for the non-observance of them. The Code itself contains nothing in regard to penalties, nor do the By-Laws of the Association take cognizance of these except to exclude from representation local societies which have not adopted the Code, or "which have intentionally violated or disregarded any of its articles or clauses." With this exception, the enforcement of ethical rules is left entirely to local societies. The fault, if fault there be, lies at the doors of the latter. But granting the fault to be ever so great and widely extended, is this a valid reason for formally repudiating obligations which are morally binding? Are the principles of morality pertaining to any of the duties of life to be ignored because immorality prevails? Are penal laws to be erased from the statute-book because punishment often does not follow crime? Although few, if any, live up to the Scriptural injunction to "do unto others as you would that they should do unto you," is this quintessence of religious duty to be expunged from Holy Writ? It is the salutary influence on the minds of members of the profession, in which consists the greatest potency of the

[1] Address at the Convention of Medical Editors, 1883.

ethical code for good, and I will go so far as to say that the Code were invaluable were no penalties incurred by violations of it beyond those pertaining to the conscience of offenders.

The portion of the Code which is especially objected to is that relating to consultations with irregular practitioners. The advocates of the New Code, so called, in the State of New York, would permit consultation with all legally qualified practitioners of medicine. The advocates of "No Code" would leave it entirely to individual judgment to decide with whom members of the medical profession should meet in consultation. After quoting the portion of the Code relating to this topic, I will ask your consideration of the views which I shall offer. The following is the article of the Code referred to:

"A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner who has a license to practise from some medical Board of known and acknowledged respectability, recognized by this Association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation when it is requested by the patient. But no one can be considered as a regular practitioner, or a fit associate in consultation, whose practice is based on an exclusive dogma to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry."

The excluding clause which is the last sentence, specifies who is not to be considered as a regular practitioner. No one surely will deny that a practitioner such as is specified in that clause, cannot be considered as a regular practitioner. The article does not assume to embrace a comprehensive definition of irregular practitioners. At the time when the Code of Ethics was adopted, the great majority of irregular practitioners were men who not only based their practice on an exclusive dogma, but made no concealment of their rejection of the "aids actually furnished by anatomy, physiology, pathology, and animal chemistry." They made no pretension to knowledge of these branches of medicine, and they scornfully repudiated the "accumulated experience of the profession." The language of the article, which applied well enough to most of the irregular practitioners at that time, is not as applicable to those of a later date. It is not affirmed in the wording of the Code, that holding an exclusive dogma is, in itself, sufficient for a practitioner to be considered as irregular. The language which refers to an exclusive dogma, is to be taken in connection with the remainder of the same sentence. Exclusive dogmas have prevailed, to a greater or less extent, in past time, among members of the regular medical profession. Legitimate medicine places no restrictions on individual opinions; it does not assume to interfere with the utmost freedom in this regard. What is it then, irrespective of a "rejection of the accumulated experience of the profession and the aids actually furnished by anatomy, physiology, pathology, and organic chemistry," which stamps irregular practitioners? Is it not the assumption of a distinctive name, such as homœopathist, eclectic, botanic, etc., voluntarily assumed as an announcement to the public of the adoption of a system of medicine, distinct from, and opposed to the practice of the regular profession, and on this distinction and opposition basing their claims as practitioners?

In order to make my meaning clear, let me illustrate it by examples. Within the recollection of those who have been in the profession for more than half a century, there prevailed simultaneously, for a time, two dogmas quite opposite in character, each having its ardent partisans. I refer to Broussaism and Brownism. Broussais and Brown were men of genius and learning, led astray by specious theories. They were honest in their opinions, and they sought to convince members of the profession, not the public, of the truth of their dogmas. Their partisans were often called Broussaists and Brunonians; but they never assumed these names as sectarian designations. Now, had they assumed these names, making themselves known to the public as practising Broussaism or Brownism, and on this ground basing their claims for practice, they would have been irregular practitioners not entitled to professional fellowship. As it was, they were not without the pale of the regular profession.

As a hypothetical example, *per contra*, suppose a graduate from a medical college of acknowledged respectability, whose professional attainments are sufficient to qualify him for membership of the regular profession, has adopted a sectarian name and allied himself with those who profess antagonism to legitimate medicine. He is, therefore, an irregular practitioner whatever may be the particular tenet which is ostensibly the basis of his practice. Let it be supposed that such a practitioner is desirous of being enrolled in the ranks of the regular profession. I need not say that this profession has no creed, no articles of faith, no traditional doctrines which it imposes as conditions for membership. It enjoins no limitations of private opinions, it matters not how fantastic. In order that such an irregular practitioner as has been represented may enter the regular profession, no relinquishment of honest convictions is essential. In addition to educational and moral qualifications, the renouncement of a sectarian designation, of the hostility to the profession thereby involved, and conformity to the rules of medical ethics, are alone necessary. It is a calumny to say that persons are excluded from the medical profession on account of peculiar views, however irrational, and that conversion and recantation are essential for professional fellowship. The doors are closed to no one who has received a regular medical education, and whose conduct is governed by the rules of medical ethics.

It might prove a hazardous experiment to tamper with a Code of Ethics so complete and perfect as our National Code, and which has stood so well the test of time. Daniel Webster was accustomed to stigmatize efforts to amend the Constitution of the United States, as attempts to "tinker the Constitution." This pithy saying might be applied to propositions for altering our ethical code. But it is safe and reasonable for interpretations of the Code to be authorized from time to time, in adaptation to circumstances as they arise; and I

submit, as a recommendation, that the Association adopt resolutions embodying a more precise specification than the Code furnishes, of the grounds for refusing fellowship with irregular practitioners. This recommendation is in accordance with precedents. At the annual meeting in 1869, the Association adopted a resolution which recognized "specialties as proper and legitimate fields of practice." Herein was an authorized interpretation of the Code in adaptation to new circumstances. It was also resolved not to be "proper for specialists publicly to advertise themselves as such, or to assume a title not specially granted by a regularly chartered college." If there be the least room for uncertainty, let it be specified distinctly that the adoption of a sectarian title is not merely a violation of medical ethics, but a voluntary disconnection from the regular medical profession, and that professional fellowship is thereby not only inconsistent with self-respect, but prejudicial to the usefulness, the honor, and the true interest of the profession.

I believe that I do not err in saying that those objections made to the Code of Ethics which call for serious consideration betoken either an inadequate appreciation or an erroneous construction of the Code, and, therefore, such objections can be removed by authorized interpretations, which, being simply explanatory, without involving essential changes in the Code, are not subject to the provisions for amendments of articles embraced in the constitution and by-laws of the Association.

I must pass cursorily over the remaining objects for which, as enumerated in the preamble to the plan of organization, our Association was instituted. The means for "enlightening and directing public opinion in regard to the duties, responsibilities, and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those engaged in it," furnish many topics which, if time permitted, would claim consideration.

Every member of our profession is often made painfully aware, not only of apathy, but misapprehension, in the public mind, as regards our "duties, responsibilities, and requirements." The popular diffusion of our Code of Ethics, allowing it to speak for itself, would go far toward the removal of many errors in regard to our profession. A valuable service, not less to the public than to the profession, might be rendered by proper efforts in this direction. In this way the public may, perhaps, be led to understand and appreciate the rules of etiquette for which we are often held up to ridicule, our opposition to secret nostrums and patented discoveries or improvements, and our refusal of fellowship with irregular practitioners. Recurring to the last-named topic, many suppose that fellowship with those who are not of the regular profession is refused either from a false sense of dignity or from prejudice, regardless of the dictates of humanity.

Now, the Ethical Code, neither in letter nor spirit, inculcates nothing in conflict with the humane exercise of our calling. This is a superfluous assertion to those familiar with the teachings of the Code. The principles of humanity underlie all its practical precepts. Quoting words which have been already quoted, "The good of the patient is the sole object in view." There are circumstances under which the higher law of philanthropy, placing in abeyance those rules of the ethical code as well as of etiquette which, under other circumstances, claim obedience, not only permits but commands members of the regular profession to bestow their professional services without stopping to ask whether a practitioner with whom chance has brought them into association be, or be not, a "fit associate in consultation." Under such circumstances, association with an irregular practitioner, governed by a supreme regard for humanity, involves neither fellowship nor professional affiliation, and it is to these alone that ethical restrictions apply. Let it not be conceded for an instant that there can be any antagonism between humanity and medical ethics. Nor is it difficult, in particular instances, to decide practically in what way the dictates of humanity are to be harmonized with ethical rules. Regarded in the light derived from both these sources, the path of duty is sufficiently plain. Any act honestly performed purely for a humane purpose, cannot but be consistent with the principle which underlies our admirable Code of Ethics. But, it is to be added, professional association with those who, in the language of the Code, are not "fit associates in consultations," except in emergencies, when philanthropy, for the time being, abolishes all restrictions, contravenes the humane objects of our profession just so far as the useful applications of legitimate medicine are thereby trammelled or curtailed. If it be inhumane, under certain circumstances, to decline association with irregular practitioners, it would be equally, or more so, under other circumstances, to make those concessions which professional fellowship requires to practitioners who profess hostility to medical science, and to the regular medical profession. The refusal of fellowship and affiliation with irregular practitioners, thus, is sanctioned not only by a sentiment of self-respect, and respect for our profession, but by a proper regard for the dictates of humanity.

The work in the several sections of our Association is of importance, aside from its intrinsic value, as a means for "exciting and encouraging emulation and concert of action in the profession." Now that whatever is here done is speedily laid before the profession through the medium of the weekly journal, it is to be hoped that there will be a larger attendance and greater activity at the meetings of the sections than hitherto. It is here that efforts are to be made for the advancement and diffusion of medical knowledge. On the results thereof must be based the estimation, in our own country, of the usefulness of the Association, and its rank as compared with sister associations in other countries. In short, we shall contribute to the true success of the Association, as we increase by our attendance and coöperation the value of the sectional work.

Our Association, both by precept and example, has aimed to facilitate and foster friendly intercourse between those engaged in the practice of medicine. The opportunities for the renewal of old, and the formation of new, friendships, and for social enjoyment, are, in themselves, sufficient to render the meetings of the Association of great value. Let us continue to cherish this last one of the several objects for which our Association was instituted, so that, in this point of view, to the enjoyment of its meetings may be added the pleasures of anticipation and of retrospection.

Our efforts to facilitate and foster friendly intercourse between members of the medical profession, as well as to promote the development and diffusion of medical knowledge, should not be limited to our own country. As the means of union for these objects of the medical profession of all countries, the meetings of the International Medical Congress claim a warm interest. The meeting of the Congress in London, in 1881, will ever be memorable in the retrospections of its members; and they who expect to attend the meeting at Copenhagen in August next, may anticipate much enjoyment as well as improvement. It would prove, as I doubt not, a source of great gratification to the profession of our country if the meeting of the Congress in 1887 were to be held in the United States; and I suggest the propriety of action to be taken now with reference to this desirable end. Inasmuch as an invitation should be in behalf of the profession of the whole country, and not of any particular section, it appropriately should come from the American Medical Association. If the suggestion be favorably received, it seems to me advisable that a committee be appointed with instructions to convey an invitation from this Association through its delegates to the Congress at Copenhagen. The committee may also be empowered to designate the time and place of the meeting of the Congress in 1887, and to take such other preliminary steps as may appear to the committee to be requisite.

My suggestion in regard to the International Medical Congress is not made solely on my own responsibility, but at the instance of several well known for their active interest in the welfare of the American medical profession. By one of the most eminent of these, quite recently, I was requested to make the suggestion in a letter written with a hand tremulous from serious illness which has deprived the Association of his presence at this meeting; one whose absence is a disappointment to many who were desirous to behold once more the genial, benignant countenance which has greeted us heretofore at our annual meetings; one whose writings have made American surgery illustrious; who is revered by the many thousands of practitioners who, during the last half-century, have listened to his instructions, and who is honored not only in our own country, but in other countries, as no member of the medical profession in America was ever honored before; one admired by all who have known him, and beloved by those who have enjoyed the privilege of his friendship. I know that I speak the heartfelt sentiments of every one who hears me and our brethren throughout the whole country when I express a fervent wish that Prof. Samuel D. Gross might be restored to health, and his life spared yet many years to his family, his friends, and his profession, which he adorns.

Brethren of the American Medical Association: I congratulate you on your presence at this annual meeting. It is peculiarly gratifying to meet together in this city, the Capitol of our government, in which there is so much of interest to us as American citizens. There is also much that is attractive in a professional view. We have the opportunity of forming and renewing acquaintance with the eminent members of our profession residing in this city and its vicinity. Here is the Army Medical Museum, the largest and most complete collection in existence of the results of gunshot injuries and of the diseases of armies. It is rich in illustrations of craniology and comparative osteology; and its specimens cover the whole field of medicine and surgery. Here is also the National Medical Library, the largest exclusively medical library in the world, and, as a practical working library, the most valuable owing to its immense collection of periodical literature, and the manner in which it has been indexed and catalogued. All praise and honor to the medical officers connected with the office of the Surgeon-General, to whom our profession and the country are indebted for the labor and skill that have made our National Medical Library and the Army Museum institutions of which we may justly be proud. Let us hope that Congress will not much longer delay in providing a commodious fire-proof building for the reception of the valuable collections which it would be impossible to replace, and which are of the greatest importance to the progress of medical science and education in this country.

The Naval Museum of Hygiene, although of recent growth, will be found to possess an interesting collection illustrating sanitary science, together with a good library. The National Museum, and the Museum of the Department of Agriculture, contain also much that is of interest to members of our profession.

To my congratulations are to be added my thanks for the great honor conferred on me by my election to the presidency of the Association. My grateful appreciation of the honor is enhanced by the fact that I did not seek nor desire the office. I should have been glad had the selection fallen on one better prepared to perform the duties of a presiding officer. I can only say that, relying on your indulgence and forbearance, I shall discharge these duties to the best of my ability.

May this thirty-fifth annual meeting of the Association be characterized by harmony and good feeling. With the blessings of Providence, may its proceedings strengthen the attachment of the American Medical Profession to the Association, extend the boundaries of our knowledge, and promote the welfare of mankind.

THE ADDRESS IN OBSTETRICS.

Delivered May 7, 1884.

BY THADDEUS A. REAMY, M.D.,

PROFESSOR OF OBSTETRICS AND CLINICAL GYNECOLOGY IN THE MEDICAL COLLEGE OF OHIO; GYNECOLOGIST IN THE GOOD SAMARITAN HOSPITAL.

FELLOW-MEMBERS: Custom, as well as law, prescribes as one of the duties of the Chairman of a Section that he present in his annual address a digest of the progress made in that special department during the past year.

Compliance with the letter of this law is now unnecessary, and would, therefore, prove unprofitable. Medical journals, general and special, both home and foreign, conducted with great ability, and exhibiting much energy and zeal in collecting and publishing the latest advances in all departments, are promptly placed by rapid mail facilities upon the table of every reading member of the profession. Moreover, the editorial criticisms of new doctrines, discoveries, methods, or operations are generally from the pens of those who by education and special training have superior abilities for such work. It is, therefore, deemed appropriate, on

the present occasion, to refer you for an "Annual Report on Obstetrics and Diseases of Women" to these more fertile and instructive sources.

Craving your indulgence, I beg leave to offer, in lieu of such an address,

NOTES OF TWO HUNDRED AND THIRTY-ONE CASES OF OPERATION FOR LACERATION OF THE CERVIX UTERI.

The date of my first operation for lacerated cervix, "Emmet's Operation," was February 28, 1874. I have now made the operation upon two hundred and thirty-one patients. Not a single death has occurred. In six cases the operation was followed by perimetritis, parametritis, or peritonitis. In but three of these cases, however, were the symptoms sufficiently severe to cause material delay in complete recovery. In one case, included in these three, there were perimetritis, parametritis, and general peritonitis. The patient was confined to her bed for three months. During the attack (acute stage) the peritoneal cavity was aspirated twice. On one occasion, seventeen ounces of serum were removed. This woman finally recovered her health completely. Considerable immobility of the uterus remained for a long time; but now, at the expiration of two years and a half, its mobility is about normal, and menstruation normal and painless; whereas, prior to the operation, she suffered both from menorrhagia and dysmenorrhœa. She was the mother of two children, the youngest being four years old at the date of operation. No abortions had occurred. Sterility continues.

The above case was one of bilateral laceration, extending on each side to the vaginal junction, the torn lips being widely separated and eroded. I attribute the inflammatory complications following the operation in this case to the undue degree to which the uterus was dragged down in order to give unobstructed access. On this point I shall have something further to say before the close of this paper. Complete recovery ensued in the other two cases, but convalescence was slow.

Of these 231 cases, in 170 the laceration was bilateral, in 38 unilateral. Of these latter, 23 were on the left side, and 15 on the right. 16 cases were stellate, in 2 of which there were four distinct lacerations. In 5 cases there was laceration of the posterior lip only; in 2, of the anterior lip only. In 80 cases the laceration was extensive, in 15 of which it extended to the cervico-vaginal junction on both sides. In 22 of the bilateral cases, the laceration extended to the cervico-vaginal junction on one side only. In 3 cases the rent extended to the internal os. In one of these, the vaginal wall was likewise extensively lacerated: the peritoneal cavity had probably been opened, followed by protracted cellulitis. This patient remained a helpless invalid during the three years intervening between the accident and the date of my operation. On one side it required twelve sutures to close the cervical and vaginal rent. Perfect success followed the operation, the patient being restored to robust health within six months.

In 167 cases there was perineal laceration to an extent that left deformity, either at the vaginal orifice or more externally. In 15 cases the anal sphincter was damaged. In 7 cases the recto-vaginal septum was opened up. In 26 cases I operated upon the cervix and perineum at the same sitting. In 5 cases of this series, I curetted the uterus with my blunt wire curette at the same sitting; this, of course, being the primary of the three procedures. In none of these five cases did a single untoward symptom arise. The results were perfect.

In 50 cases I operated upon the perineum after recovery from the cervical operation. Each of the above-mentioned cases in which the operation involved the recto-vaginal septum is included in this series of fifty subsequent operations. It is perhaps as well to state here that I never hesitate to curette the uterus in a case demanding it, at the time of operating upon the cervix. Nor do I hesitate to use the curette in a case requiring it immediately preceding a perineorrhaphy, pretty extensive clinical experience having convinced me that neither of these operations adds materially to the danger of curetting. Indeed, I am inclined to the opinion that in certain cases in which the conjoined conditions demanding the two operations exist, the depletion of the cervix in trachelorrhaphy presents an element of safety against inflammatory processes which may follow curetting. Three violent cases of traumatic peritonitis have occurred within my personal experience from the use of the curette, unconnected with other operation.

In not a single case of trachelorrhaphy performed by me did secondary hemorrhage occur. In every case in which hemorrhage was troublesome during the operation it was readily controlled by the stream of hot water which it is my custom to have flow upon the field of the operation during its progress, with but three exceptions, in which it being necessary to denude the torn surfaces deeply, twigs of the circular branch of the uterine artery being cut, compression with torsion forceps was invoked. Contrary to the practice of most operators, I have not, since my fourth operation, employed a tourniquet, ligature, or any similar method to control hemorrhage during the operation. As early as 1875, in my clinical lectures delivered in the amphitheatre of the Good Samaritan Hospital, Cincinnati, and repeated each year since, I emphasized the importance of allowing, in most cases, free bleeding from the denuded surfaces. First, (a), because it softens the tissues so as to allow more perfect coaptation of the tips to be united; and (b), because of this softening, which is immediate, the tissues are easily penetrated by the needle in carrying the sutures. Second, most important of all, this depletion not only promotes the return of the indurated cervical tissue to its normal condition, but is an immense factor in again starting the process of involution of the uterus, which had been arrested by the laceration and its consequences.

The restoration of form in closing the divided lips of a torn cervix, especially where the deformity is great, is important. The removal of such pathological conditions as may threaten the development of cancer, and no one can deny that this is in a certain proportion of instances within the scope of the operation, may be even more important; but the influence of trachelorrhaphy properly done, upon subinvolution, cannot be over-estimated. Thorough denudation, cutting out all cicatricial tissue, and allowing free depletion embrace the essential points in the operation so far as its influence upon involution is concerned.

So powerful is the influence of hot water in controlling hemorrhage from small vessels, when it can be poured directly upon the bleeding surface, that I have fre-

quently found it expedient to withhold this agent for a short time after the denudation is completed before introducing the sutures, in order that sufficient bleeding may occur to accomplish the ends above indicated.

The character of the labor which had resulted in laceration, could not be determined with any degree of certainty, except in comparatively few instances, since information upon this point could be obtained only from the patients themselves. In forty cases, delivery was accomplished by the forceps; in two by craniotomy; in two by turning. Two of the cases in which rupture involved the recto-vaginal septum, were forceps deliveries. It is my belief that early rupture of the membranes, and attempts at forcible dilatation of the cervix by the finger or fingers of the accoucheur or midwife, and the improper use of ergot, are far more fruitful sources of laceration of the cervix than the obstetric forceps.

In the city of Cincinnati seventy per centum of all deliveries are attended by midwives, who, with very few exceptions, are ignorant and unskilful. The sins above enumerated lie closely at their doors. But it cannot be denied that these errors of practice are sometimes perpetrated by well-educated physicians. Unquestionably, many cases of laceration occur unavoidably, no matter whatever care and skill may characterize the accoucheur's services. It should be the duty, therefore, of the gynecologist, in all cases in which patients are referred, or otherwise come into his hands for operation, to protect the physician who may have been present at the confinement against censure which may be unjust. All the more because the laity, when informed that a laceration of either cervix or perineum has occurred, at once assume a want of skill or care in the obstetric service. The emphatic declaration of the unavoidableness of these accidents should, by the gynecologist, be voluntary. So great is the danger that professional reputation may unjustly suffer from this source of censure that in an editorial in a recent issue of one of the ablest medical journals in the country, this was used as an argument against the adoption of Emmet's operation, except in extreme cases.

Mr. Jonathan Hutchinson points out that in many cases the first stage of cancer is that of inflammation; that "all inflammations are infective, and inflammatory processes may pass by almost imperceptible gradation into malignancy." The acceptance and appreciation of the above facts would lead, in many cases, to the more vigorous treatment of localized inflammations, more especially when they are situated in structures known from clinical experience to be specially prone to cancer, as the uterine cervix, the mammæ, etc. These considerations alone, even if they were not supported by others, urge upon our attention, with great force, the importance of Emmet's operation. It is the concurrent testimony of almost every distinguished American gynecologist who has expressed himself on this subject, together with many abroad, including Briesky and Schroeder, that the fretting of exposed tissue consequent upon ununited laceration of the cervix is a prolific source of danger in developing cancer.

Emmet, Thomas, Goodell, Mundé, and others, have cited cases verifying this danger. In my own practice quite a number of cases of cancer of the cervix have been observed in which the neoplasm developed either in the cicatricial tissue resulting from the laceration, or in the apex of the cleft. In my opinion, the influence of the accident under discussion in producing cancer has never been fully comprehended by any one. Emmet, the distinguished author of the operation under consideration, at first spoke out unequivocally; now, however, he alleges that he does not make trachelorrhaphy once where formerly he did it ten times; and it is easy to read between the lines of what he has recently written that he does not now believe the evils arising from laceration, not operated on, nearly so universal as he formerly believed them to be. He seems greatly to deplore the extent to which the operation is being done, and, as I think, without just cause. In further considering the relations between this injury and Emmet's operation to cancer, it may not be amiss to call attention to the fact, so thoroughly recognized by clinicians, that cancer of the cervix is almost exclusively found in women who have either given birth to one or more children, or been the subjects of abortion. So far as the cervix is concerned, cancer is a disease of child-bearing women, not of virgins.

In more than three hundred cases of cancer of the cervix of which I have notes, but one occurred in a virgin, and but ten in married women, in whose cases I could obtain no evidence of abortion or child-bearing. Can any one deny that such facts point strongly to the local origin of cancer in these cases at least? And can it be doubted that injuries inflicted upon the cervix during parturition have a direct or remote connection with this origin? Would it not be wise to repair these injuries when they are appreciable by whatever method it may be done most speedily and certainly? It is claimed that Emmet's operation should be limited to cases in which ectropion has occurred or in which a cicatricial plug imprisons or presses upon branches of sentient nerves causing painful reflex symptoms. I have heard it repeatedly stated that, no matter how extensive the laceration, the operation is not warranted unless these symptoms are present. These are, in my judgment, errors. Any laceration which has healed without its surfaces being in contact must have healed without complete union, although its extent may have been much lessened by granulation. But in all such cases there is more or less cicatricial tissue in the field of repair. This does not apply to the many cases in which anterior and posterior laceration occurs, and the parts not being separated complete union has occurred without the aid of the surgeon.

Cicatricial tissue in such locality, even should it not produce reflex symptoms, should be removed thoroughly and the parts closed so as to obtain union by first intention, in which cicatricial tissue is never found. If the rent be small then the operation is small, especially if it be done before chronic inflammation of the cervix has occurred as a result. The denudation need not be extensive or deep. In many cases an anæsthetic need not be administered, as the parts are not very sensitive. The uterus need not be drawn down, so there can be but little danger of cellulitis or peritonitis resulting. Why not do the operation in these slighter cases then as the simplest and safest method of cure, and thus avoid results which might arise in the future and prove more serious?

It is impossible for me to give exact data as to the influence of the operation on sterility, as many of these

cases soon after recovery passed out of my knowledge. And as the last fifty cases were operated on within the past thirteen months, sufficient time has not elapsed to test the question. I know, however, of fifteen cases in which conception has occurred and delivery took place at term. I have no doubt that as many more have proven fruitful. Of these I attended in labor six, one of these within the past month. In no case did relaceration occur, labor being normal except in two cases. In these dilatation of the cervix was slow, but finally complete; in neither case was it protracted. I have learned from medical gentlemen, who attended several of my other cases, that labor was normal. I believe that the operation properly done favors fertility—and often cures sterility. In but two of my cases did union fail. In one of these I foolishly used catgut ligature. In the other failure it was due to the sutures not being sufficiently tightened. In each case subsequent operation was successful.

I may have made the operation in cases not demanding it, but, from my point of view, I do not think so. In eight or ten cases reflex nervous symptoms which I hoped to banish by the operation remained, but in most cases the good effects were obvious; in some cases the cures were almost marvellous. My method of operating, after much thought and some experience, I think worthy of consideration, as it must, as I believe, have some advantages over methods generally adopted.

1. I use nothing but the single volsella to draw the uterus down, with which I seize but one lip, the one to be denuded first, at a time.

2. I draw the uterus down as little as possible. This caution should be the more scrupulously observed if any cellulitis remains about the base of the broad ligaments or elsewhere.

3. I outline the denudation with a sharp knife, and then cut the tissue included in the line with a sharp scissors. This prevents the rolling of tissue at the borders.

4. Allow free bleeding or not, as the condition of the tissue of the cervix and the involution or subinvolution of the uterus may require.

5. Use a nearly half-circle needle with very sharp point, armed with Chinese silk. A needle thus shaped can be drawn through the second lip and withdrawn very much more easily than a straight needle, or one curved only near the point, This advantage is all the more apparent when the uterus is not drawn down, as then the vaginal wall makes the withdrawal of the usual shaped needle difficult. I employ a plain needle-holder without any catch or slide, but strong. Silk is preferred to wire, because it can be tied much more quickly, and the tension more easily adjusted. Then there are no ends to jag the vaginal walls. Another great advantage of the silk over the wire, is in the fact that the sutures may be left in from fifteen to thirty days without danger of cutting out; quite an important matter in a case in which trachelorrhaphy and perineorrhaphy are done at the same sitting. The perineum may heal perfectly and be strong before removing cervical sutures. My custom is to allow the ends of the sutures to remain sufficiently long to reach nearly to the vaginal opening. This facilitates their removal.

6. Wash out the cervical canal at the close of the operation with a recurrent flow syringe, to remove any blood that may have found its way there during closure of the sutures. Have the nurse wash out the vagina with warm carbolized water within an hour after the operation is completed. The vagina is not syringed again until the sixth day; then daily until patient is dismissed. Cleanliness is the only antisepsis employed.

Authorities have been but little quoted, as it is the purpose of this paper to give simply notes of my own cases

ORIGINAL ARTICLES.

DOUBLE OVARIOTOMY; RECOVERY.

By GEORGE F. FRENCH, A.M., M.D.,
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Cases of successful single ovariotomy are now so frequently reported that they scarcely arouse professional attention. The following case, however, presents, I think, sufficient complications to insure interest.

Mrs. Z., æt. 31, mother of one child seven years old, came to my office for the first time on May 9, 1883, complaining of an abdominal enlargement, supposed by physicians in the town where she resided to be a uterine fibroid. The tumor was first noticed seven months before, and had gradually attained its present size—that of an ordinary seven months' pregnancy. Mrs. Z. thought she had felt motion repeatedly until within a short time. The growth had caused but little inconvenience until lately, when there had been constant pain in the right side of the abdomen. Flesh and strength had gradually failed, and the patient was seriously reduced. Digestive disturbances had been present from the first; menses irregular and for some months absent; breasts unchanged. On examination, the abdomen was found uniformly enlarged; percussion sound flat in front and tympanitic at the sides; fluctuation indistinct. Through the abdominal walls a firm, hard mass could be felt, reaching from the pubes to the umbilicus, presenting a smooth surface towards the left, and several small prominences on the right. The pelvis was occupied by a tumor continuous with that on the left. No contractions felt; no auscultatory sounds. Ballottement could be felt from Douglas's cul-de-sac. To add to the obscurity of the case, the cervix was large, soft, and blue, and the os patulous.

This condition, as was afterwards discovered, was due to the use of a tent a few days previous to the examination. Notwithstanding the absence of some important signs, the patient was thought to be pregnant at about the seventh month, with possibly a dead child. The patient was advised to remain in town a few days, when a second examination might possibly clear up all doubts; this she could not do. An interval of a month, however, sufficed to clear up the diagnosis and decide the ovarian origin of the enlargement.

June 22.—I was summoned to see the case again with Dr. Milligan, of Wabasha, who had, a few days before, tapped the tumor and drawn off several quarts of thick fluid. The abdominal walls were now lax, the fluid small in quantity, so that the

several cysts of which the tumor was composed could be distinctly felt. The cervix, too, was now small and firm. The uterus could be made out bimanually and separated from the tumor. Its cavity measured three and a half inches. The diagnosis of ovarian cyst being thus demonstrated, it was decided to remove it at once. This was done with the assistance of Dr. Hunter, of Minneapolis, and Drs. Stone, Milligan, and Van Dyke, of Wabasha. The preparation of instrument, sponges, etc., as insisted upon by Lister, was closely followed; no spray, however, was used.

The operation began with the usual incision in the median line, three or four inches in length, beginning just below the umbilicus. Before the peritoneum was reached in the fascia transversalis, two large veins were discovered running directly across the line of incision. These were ligated with catgut. Hemorrhage having ceased, the peritoneum was opened on the director, when a large quantity of ascitic fluid escaped. The cyst was found adherent across its upper surface to the abdominal wall. These adhesions were fresh and easily broken up with the hand, with very little bleeding; no adhesions to the viscera were discovered.

The large cyst presenting at the incision was next punctured with the trocar, and its grumous contents allowed to flow off. The tumor-mass was still very large, but after gentle manipulation and the breaking up of numerous smaller cysts, the walls of which were very fragile, the whole mass, weighing thirty-five pounds, rolled out of the abdomen, attached only by a long pedicle to the right ovary. The abdominal walls were made to hug the tumor, so there was no escape of the bowels, which were protected by broad, flat sponges wet with warm carbolized water.

The pedicle was now examined, and, being found broad and vascular, was transfixed twice by a strong needle armed with silk cord, and tied in three separate parts. The tumor was cut away; the pedicle being absolutely dry, was dropped back into the pelvic cavity. Upon examination the left ovary was found to be a mass of small cysts, equally demanding removal. This was done by piercing the broad ligament as far from the ovary as possible, with a needle carrying a double ligature tied both ways, the ovary cut away and the pedicle dropped back as before. The abdominal and pelvic cavities were now thoroughly sponged out, and the bowels carefully cleansed. The peritoneum covering them was bright red, and the minutest vessels very prominent, with here and there points of exudate—unmistakably incipient peritonitis. The external incision was quickly closed with silver sutures put in place with the Peaslee needle, and the wound covered with carbolized gauze and cotton, held in place by a broad flannel bandage.

The time occupied in removing both ovaries was one hour and ten minutes. The patient rallied well from the operation, but in the second week exhibited a rise of temperature and rapid pulse caused by a small abscess in the abdominal incision. With this exception she made a good recovery, was able to go out of the house in four weeks, and has been well ever since, but has never menstruated.

The deceptive manner in which the several cysts simulated the fœtal parts, the ballottement of one of the cysts, the soft and livid cervix, conspiring to mislead in diagnosis, the double operation and rapid subsidence of the well-marked peritonitis, made the case one of unusual interest.

MEDICAL PROGRESS.

Sublimate Inhalations in Putrid Bronchitis.—Prof. Korányi reports a case of right pleurisy and mitral insufficiency in which putrid bronchitis was subsequently developed. Inhalations of carbolic acid and turpentine were used for four weeks, but caused no change in the character of the sputa. Korányi then used a solution of corrosive sublimate (gr. ½ to water f℥iij), of which ℥v were inhaled every morning and evening. In a week the patient was free of fever, coughed less, and the sputum was much better, and after a few days it was odorless.—*Centralbl. f. d. gesammt. Therap.*, February, 1884.

The Ninth Divulsion of the Stomach.—On March 15th, Prof. Loreta performed this operation upon a young woman, æt. 20, who had stenosis of the cardiac orifice. She was doing well on April 9th. The cause of the stenosis is not stated.—*Gazz. degli Ospitali*, April 9, 1884.

Absence of Kidneys and Uterus.—Dr. Edmondo Coen, assistant pathologist in the University of Bologna, furnishes, in the *Annali Universali di Medicina*, for January, a minute anatomical description, illustrated by figures, of a fœtus without kidneys or uterus.—*Med. Times and Gaz.*, April 12, 1884.

Cold Douches in Febrile Diseases.—Dr. A. Mogiljanski, after giving the history of eighty cases, draws the following conclusions:

1. The cold douche, at 68° to 77° Fah., lowers the temperature in fever not less than a bath at 77° Fah., lasting ten minutes, and if two douches are given at an interval of one hour, the temperature will be more reduced than by the bath.

2. Two douches and one bath produce a more powerful effect than two baths and one douche.

3. The heart's action is slowed by the action of the cold douches, while at the same time the respiration is slowed in a less degree.

4. The muscular strength increases after the use of the douche.

5. Under the douche the respiratory movements become slower, deeper, and irregular.

6. The so-called typhoid state disappears after the use of the douche, though only for a short time. As the inspirations become stronger the lungs are ventilated, and the appearances of hypostasis disappear.—*Centralbl. f. d. gesammt. Therap.*, March, 1884.

Nephrectomy.—Dr. Thomas Savage reports a case of nephrectomy performed in 1883. The right kidney was very large and full of pus. A clamp was used to the meso-nephron. The patient died, but Dr. Savage thinks that the result would have been different had drainage been used here.—*British Medical Journal*, March 8, 1884.

THE MEDICAL NEWS.

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OF MEDICAL SCIENCE.

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SATURDAY, MAY 10, 1884.

THE AMERICAN MEDICAL ASSOCIATION.

WASHINGTON, May 8, 1884.—The Thirty-first Annual Meeting of the American Medical Association was one of the largest, as well as one of the most successful in the annals of the Association. The attractions of the National Capital with its many beautiful public buildings, and its numerous scientific museums and collections, served to swell the number in attendance to thirteen hundred or more, and the high professional standing of the President of the Association has added to the character and dignity of the proceedings. The programme was full, and the attendance upon the various Sections unusually large. The President's Address was well received, and elicited favorable comment; and in accordance with his recommendation it was unanimously determined by the Association to tender a formal invitation, on behalf of the Medical Profession of the United States, to the International Medical Congress at Copenhagen to hold its next session, in 1887, in the City of Washington.

In the selection of President for the new year the Nominating Committee honored a representative from the South, who is well known, not only for his contributions to our literature, but also by the active interest which for many years he has manifested in the affairs of the Association.

The chief point of interest in the meeting centred in the first annual report of the Trustees of the *Journal*. The exhibit, while not very flattering, was thought to fully justify the Association in continuing, for another year, the publication under the existing arrangements.

At the close of the first day's session, gloom was cast over the Association by the announcement of the death of its venerable and beloved ex-President, Dr. Samuel D. Gross, and as the sad event was announced each Section took action towards honoring his memory, and the Association subsequently, in general session, paid a feeling tribute to the distinguished surgeon, who, ripe in years and full of honors, had just passed away.

The social features of the meeting were not neglected, and receptions at the Executive Mansion by the President, and at private houses were largely attended. Harmony and good feeling universally prevailed, and the Washington meeting will be long remembered as one of the best in the history of the Association.

THE DEATH OF DR. S. D. GROSS.

THIS country has had many eminent surgeons, but among these only two who, each in his day, have stood forth conspicuously above their fellows as the great representatives of American surgery. One of these, Philip Syng Physick, has been numbered with the dead for half a century, and the other, Samuel D. Gross, has just passed away.

There will be sorrow in our land among the profession from the Atlantic to the Pacific, from Maine to Texas, as the tidings reaches them of the death of the great American surgeon. Nay, more, wherever the science of medicine is known, his fame has gone, so that his death will be deplored not only in obscure hamlets and in distant isles, but in the crowded capitals of the world.

A grand life has ended; a great worker, working on until near four score years, has ceased from his labors; the cunning hand that for the saving of life guided the swift scalpel amid living tissues is motionless; the lips which for nearly half a century have been opened to give wise instruction are mute; the noble form which seemed to typify the greatness of the indwelling soul is forever prostrate; and the brain which was so richly stored with all professional knowledge is forever powerless.

Dr. Gross's life-work is done; and how great that work has been! In Cincinnati, in Louisville, in New York, and in Philadelphia he has been a medical teacher, and the thousands he has taught are scattered over the length and the breadth of the land. He has been recognized as the greatest teacher of the principles of surgery our country has ever had. His lectures, always carefully prepared,

and delivered without manuscript, save brief heads of the different parts of the discourse, were models of simplicity, and clearness of language, and completeness, and were delivered in a most impressive manner; he taught with authority, and, therefore, with power.

Dr. Gross, almost from the beginning of his work as a medical teacher lecturing to large classes, and lecturing for so many years, has been the teacher of more physicians than any one upon the continent. When we add to this the influence exerted by his writings, especially by his surgery, Dr. Gross has wielded a great and extensive power—greater and more extensive than that of any predecessor, in this country, at least.

As a practitioner, he was kind and devoted to his patients, shrinking from no exposure, and from no sacrifice of time and rest in their behalf. Other operators may have excelled him in mechanical skill, but none in wise judgment, and in hearty devotion to the interests of his patients.

He was in every element of his being and life a doctor, thoroughly devoted to his profession, constantly striving to advance its interests, and to promote the welfare of its individual members. How many a doctor, whether private pupil, or simply an attendant upon his lectures, or even without any previous acquaintance, has had from him kind words, wise advice, a helping hand. He has done much, by his words and by his example, to implant hope, stimulate ambition, to incite men to work, and thus rise to usefulness and honor, as the just reward of honest labor. To-day the American medical profession occupies a higher position because of the living influence and work of Dr. Gross.

Among his colleagues in the profession he was regarded with the greatest love and esteem. In the American Medical Association he was an irresistible power. When he rose to speak, what a hush of eager expectation; how every eye was turned to look upon that noble presence, the grand brow with its seal of intellectual power, the silver hair that seemed to tell of wisdom, the calm, kind face lighted with a genial smile expressive of a benevolent heart. Children playing with one who afterward became a famous monarch and conqueror in ancient times, as if with prophetic inspiration, crowned him king; but who, having seen Dr. Gross in the American Medical Association, or in other medical bodies, has not felt that he was a king amongst men, noble as the best of earth-born monarchs.

Few men have contributed as much as he has to medical literature. His writings extended over the field of obstetrics and pathology, as well as surgery, and the great work of his life, his *System of Surgery*, will stand an enduring monument of his surgical judgment and lore. When we join to the books he wrote, his contributions to periodical literature, to medical societies, and his public addresses, the amount of his literary professional work appears immense. His advancing years did not hinder him from placing on record the valuable experience of his long professional life, for within a few weeks of his death he prepared two very able papers, one for the American Surgical Association, and the other for the Obstetric Section of the American Medical Association, which he purposed reading before the respective bodies, but, alas, the hand of fate has ruled otherwise.

Dr. Gross was one of the most genial of companions, one of the most generous of hosts; his large knowledge of men and affairs, his extensive study of books, especially of those belonging to the profession, made his conversation both interesting and instructive, while his hospitality was proverbial.

He was the recipient of many and great honors. He was the founder of the Pathological Society of Philadelphia, of the Philadelphia Academy of Surgery, and of the American Surgical Society, and president of each of these bodies. He has been president of the State Medical Society, and of the American Medical Association, and of the International Medical Congress which met in Philadelphia in 1876. From the three great seats of learning in Great Britain he has received its highest honors — LL.D. from Oxford in 1878, from Cambridge D.C.L. in 1880, and LL.D. from Edinburgh in 1884, and from the University of Pennsylvania last week the title of LL.D. He was a member of various learned societies both in this country and in Europe.

Probably the most pleasing tribute paid to the worth and work of this noble man was the complimentary dinner given him by the profession of this city just five years ago. No one who was present can forget that memorable occasion; how heartily all bore willing tribute of admiration and love to the guest of the evening. The following passage in Dr. Gross's address was eminently characteristic of the man, of his work, and of his faith: "Oh! for a glance at the profession half a century hence, when man, enlightened and refined by education, and redeemed from the thraldom of ignorance and superstition, shall reflect more perfectly than he now does the image of his Maker." That was the spirit in which Lord Bacon believed medicine should be exercised, "For the glory of God, and for the good of man's estate."

Dr. Gross's great success is to be attributed to his constant work, to his indefatigable industry. Quite as much as any man in the profession he illustrated the truth of Velpeau's dying words: *Il faut toujours travailler, mes amis.*

Chance is one of the smallest elements, if element at all, in honorable professional success.

"The heights by great men reached and kept,
Were not obtained by sudden flight,
But they, while their companions slept,
Were toiling upward to the light."

There is thus no mystery in the grand success of Dr. Gross's life. He labored faithfully and systematically, and had the just reward of his toil; in all positions and in all duties he was true to the profession, and the profession was true to him, honoring, admiring, loving him in life, and in death revering his memory.

On a subsequent page will be found a complete biographical sketch of Dr. Gross.

THE SANITARY SUPERVISION OF TRANSATLANTIC STEAMERS.

The extremely unsatisfactory condition of the medical service on transatlantic steamers, upon which we commented last week, is an evil which demands prompt remedy. The danger which constantly threatens the country from the introduction of infectious diseases, against which no suitable sanitary precautions have ever been instituted, either before embarkation, during the voyage, or at the ports of entry on this side of the Atlantic, is a question of very serious national concern, and, therefore, should very properly enlist the attentive consideration and judicious intervention of the General Government.

There is no doubt as to the frequent dissemination of infectious diseases throughout the country from lack of efficient marine medical service, and want of rigid application of necessary sanitary regulations at the ports of departure and entry and on shipboard. Instances have again and again been reported of outbreaks of disease clearly and definitely traced to persons infected previous to embarkation or during transit. So notorious did this fact become in 1882, as regards smallpox, that the National Board of Health was obliged to interfere with such limited authority as it possessed, to the end that the passengers arriving from infected places should be inspected and vaccinated when deemed to be insufficiently protected. This action, however, was not at all satisfactory, and had to be supplemented by an inspection service of immigrants, instituted at different points in the west. In the spring of the same year smallpox, scarlet fever, and measles were introduced in one of our ports through inefficiency of the medical and sanitary regulation of the transatlantic steamer service.

The effects of this common neglect of precautionary measures are palpable and far-reaching. The remedy, if left to the option of the ship-owners, will not be applied, as experience has proved. The authoritative intervention of the Government is required to guard the country from the development and spread of disease introduced from abroad. This may be accomplished, as has been suggested, by requiring all persons coming to the United States to show evidence of having been properly vaccinated at least fourteen days previous to embarkation; by insisting that vessels carrying passengers shall provide suitable hospital accommodation, and necessary assistance for the care of the sick; and by establishing a competent service of marine medical officers, who, being entirely independent of interested influences, will see the law observed throughout the voyage, and will be responsible to the Government for the faithful discharge of their duties and their intelligent coöperation with the quarantine authorities.

NEW TEST FOR PEPTONES.

Since some of the most delicate tests for albumen are rendered of doubtful value because they also produce reactions with peptones, the recent announcement to the Academy of Natural Sciences of Philadelphia, by Dr. N. Archer Randolph, of a new test for peptones is of great importance. It is based upon the fact that if the acid nitrate of mercury, Millon's reagent, be added to a cold aqueous solution of potassic iodide, a red precipitate of mercuric iodide always appears. If, however, either the peptones or biliary salts be present, the precipitate of nascent mercuric iodide assumes a yellow color.

In order to render the test sensitive to minute quantities of the substances in question, it is necessary to limit the quantity of potassic iodide employed. To each five cubic centimetres of the suspected fluid, which must be cold, and either neutral or faintly acid, two drops of a saturated solution of the reagent should be added, thoroughly mixing the whole. Now if four or five drops of Millon's reagent be added, and peptones or biliary salts be present, the yellow color appears. The question as to the presence of biliary salts is easily eliminated.

By this test, Dr. Randolph has been able to detect peptones in the proportion of 1 to 17,000 parts of water.

THE ACTION OF SALICYLATE OF SODIUM UPON THE UTERUS.

The conclusions of Dr. Balette (*Thèse de Paris*) are that salicylate of sodium, in the ordinary therapeutic dose, calms the pains of dysmenorrhœa, apppears to promote menstruation, and causes its reappearance in amenorrhœa. In four cases of pregnant women, in which the medicine was given in large doses, abortion occurred in two; but no such result was observed in other cases of pregnancy in which the remedy was administered in moderate quantity.

SOCIETY PROCEEDINGS.

THE AMERICAN MEDICAL ASSOCIATION.

Thirty-fifth Annual Meeting, held at Washington, May 6, 7, 8, and 9, 1884.

(By Telegraph.)

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, MAY 6TH—FIRST DAY.

GENERAL SESSION.

THE Association was called to order by A. Y. P. GARNETT, M.D., of Washington, Chairman of the Committee of Arrangements, who, after prayer, introduced, in the absence of the ex-President, Dr. Atlee, the PRESIDENT, DR. AUSTIN FLINT, of New York, and then delivered an *Address of Welcome.*

THE COMMITTEE OF ARRANGEMENTS

then presented a report. The list of receptions tendered the Association was announced. It included receptions by the President of the United States, the Medical Profession of Washington, Mr. W. W. Corcoran and the Board of Trustees of the Corcoran Art Gallery, Commissioner and Mrs. Loring, Chief Justice Waite, the Surgeon-General and Staff of U. S. Army, the Hon. George F. Edmunds, President *pro tempore* of the Senate, and Hon. John G. Carlisle, Speaker of the House of Representatives, and by a number of other prominent citizens. An invitation was also given the Association to visit the National Insane Asylum and the Hospital in connection with it.

Letters were reported from A. Pearce Gould, F.R.C.S., and other distinguished medical men of Europe, to whom invitations to attend the meeting of the American Medical Association had been sent.

THE REPORT OF THE COMMITTEE ON REGISTRATION

was read in full, and the election of the delegates who were therein registered confirmed, a motion to suspend the reading of the report not being sustained.

A letter was received from

DR. JOHN L. ATLEE,

ex-President, expressing regret at his inability to be present, which was ordered printed with the *Transactions.*

The ex-presidents of the Association were invited to seats on the platform.

THE PRESIDENT, DR. AUSTIN FLINT, then delivered the

ANNUAL ADDRESS.

(See p. 523.)

DR. J. M. TONER, of Washington, moved a vote of thanks to the President for his admirable address, and that the address be requested for publication. Unanimously adopted.

He also offered the following resolution concerning

DR. S. D. GROSS,

which was also unanimously adopted by a standing vote.

Whereas, It has come to the knowledge of this Association that one of its former presidents and a surgeon of world-wide reputation is confined to his room by illness, therefore, be it

Resolved, That the American Medical Association expresses to Dr. S. D. Gross its heartfelt sympathy in his illness, and the sincere wish for his speedy recovery and preservation for many years to the enlargement of the world-wide reputation and justly merited honors to which he has attained.

On motion, the above resolution was telegraphed to Dr. Gross.

DR. RICHARDSON, of Georgia, stated that he had just left the bedside of the very ill and honored ex-president of the Association, and that when he asked him for any message that he might desire to send, the reply of Dr. Gross was, in a feeble voice, "Give them my love!"

DR. SAYRE, of New York, made a motion that a committee be appointed to invite the International Medical Congress, which is to meet in Copenhagen, to select the place of its next meeting in this country.

DR. GARCELON, of Maine, moved that the Address be referred to a committee of five, to take action upon the various important questions concerned in it, and report to the Association as soon as possible. This was amended so as to read "a committee of seven," and adopted.

The Association then adjourned.

SECTION MEETINGS.

SECTION ON PRACTICAL MEDICINE.

The Section met in the Congregational Church, Cor. of 10th and G Streets, Washington, at 2.30 P.M., DR. J. V. SHOEMAKER, of Pennsylvania, *Chairman*, in the Chair.

DR. E. G. JANEWAY, of New York, read a paper on

THE DANGER OF RELYING TOO MUCH UPON SO-CALLED PATHOGNOMONIC SIGNS OF DISEASE.

It is often a very brilliant thing, he said, to make a snap diagnosis, but it is not safe to do so; for many so-called pathognomonic signs of special diseases are found, on closer inspection, not to be so in reality. For instance, optic neuritis, conjoined with headache, used to be considered as a pathognomonic sign of cerebral tumor. This is not so. We know that it only means that there is some increased pressure in the brain. You must also eliminate Bright's disease of the kidneys. Volitional tremor is thought by some to be very characteristic of multiple sclerosis, but a similar condition is observed in patients who are under the influence of metallic poisons such as mercury, and also in those who have partaken freely of alcoholic stimulants. We often find considerable difficulty in cases of coma, in endeavoring to decide whether it is of hemorrhagic or uræmic origin. The variations in the temperature of the body are here a valuable help in our investigation; but they are not sufficiently certain to found a positive conclusion upon. The existence of heart murmur, or the absence of it, does not positively settle the point as to whether there is an embolus in the brain or a hemorrhage; and albumen in the urine is often associated with these lesions. The author went on to consider the so-called pathognomonic signs of other diseases—referring to heart and chest disease. It is not wise to rely too much upon these signs, but to take the whole bearing of the case in making the diagnosis.

DR. FRANK DONALDSON, of Baltimore, in opening the discussion, spoke of cardiac murmurs. He had

known of cases in which the autopsy showed marked stenosis of the mitral orifice which had presented no murmur during life.

Dr. Janeway said that in some cases of pleurisy of slight grade bronchial breathing is not present, and he had seen people much misled by it. In regard to mitral stenosis, he thought that it could sometimes be detected by a long first sound with a slightly blubbering character, even when there was no murmur.

Dr. Austin Flint, of New York, then read a paper on

THE CLINICAL STUDY OF HEART SOUNDS.

This field of research is, he said, a comparatively uncultivated one. In 1858 he read a paper on this subject before the American Medical Association in Washington. This paper which he was now reading he designed to be supplementary to the former one. The views he then expressed, as to the value of the study of heart *sounds* as opposed to *murmurs* (or adventitious sounds added on to or replacing the normal sounds), he still holds. Cardiac murmurs are very important, and they are being carefully studied, but the sounds are too much neglected.

He considered the ordinary division of cardiac sounds into two kinds—the first, or systolic; the second, or diastolic, to be very incomplete. He thought the proper classification would be to say there are five sounds—two of which are disastolic and three systolic.

The diastolic are (1) the aortic and (2) the pulmonary, heard in the right and left second intercostal spaces respectively. The systolic are (1) the mitral, (2) the tricuspid, and (3) the sound caused by the propulsion of the heart against the chest walls, which he would call the impulsion.

This last is heard best at the apex, and determines the length and intensity of the first sound of the heart, and gives the booming character that is heard with this sound. The impulsion sound is heard over only a limited area. The best place to hear the mitral sound proper is in the fourth intercostal space, far enough to the left to eliminate the sound caused by the impulsion. Here the sound is of a purely valvular character. The tricuspid sound is heard at the base of the xiphoid cartilage. Its maximum also is found where the effect of the impulsion of the heart can be eliminated.

Changes in the aortic sound. Incompetency of these valves gives rise to a diastolic murmur. But this murmur furnishes evidence of nothing more than the simple fact that there is an incompetency. Of the extent of the incompetency it furnishes no index whatever. This information must be obtained by the strength or weakness of the aortic sound which is heard along with the murmur, as compared with that of the semilunar valves on the right side, provided these be under normal conditions, or, better still, by noting the character of the impulsive sound of the left ventricle. If this be much interfered with, it is a sign of marked overfilling of the left ventricle, and of a considerable degree of insufficiency.

The aortic sound may be diminished also by the lessened quantity of blood sent into it by the left ventricle, as in cases of mitral disease. It may be increased in one of two ways: by the increased force of the systole of the heart, or by increased pressure in the systemic arteries, as, for example, in contracted kidney. This last cause, which is so much dwelt upon by many authorities as to be taken as almost pathognomonic of contracted kidney, Prof. Flint looked upon as being very doubtful. In some experiments undertaken by Dr. C. F. Roy, in which he abruptly cut off a considerable part of the general circulation by tying a main artery leading to the part, there was hardly the slightest effect produced on the aortic sound. As a matter of clinical experience, he knew that this state of the aortic sound did exist without the disease in the kidney, and *vice versâ*.

Changes in the pulmonary sound. This may be increased or diminished. Skoda pointed out the increase in the sound that is noted when the right ventricle is hypertrophied. Besides this the sound is intensified by anything causing obstruction in the circulation of the blood through the lungs. Increased blood pressure is met with in the pulmonary circulation in various diseases of the lungs, such as pneumonia, capillary bronchitis, emphysema, pleurisy, etc., and the amount of increase in the intensity of the pulmonary sound is a gauge of the amount of obstruction in the lung. When the heart is beating more rapidly than usual, as after exertion or in mental excitement, the pulmonary sound is more increased than the aortic from this same reason.

As to the significance of diminished intensity of the pulmonary sound, Dr. Flint would not say much. It would be present in regurgitation, which, however, is an extremely rare affection. The absence of the sound in aortic trouble is also of little practical moment.

Changes in the mitral sound. Heard at the place recommended by him at the beginning of the paper, the mitral sound is short and valvular. A systolic murmur here denotes simply incompetency of the mitral valve, but gives no information as to the degree. The weakness of the sound heard with the murmur will give a clue to this. The sound will also be weak when there is fatty degeneration or dilatation of the heart. In overfilling of the left ventricle, the excursive movements of the mitral valve are interfered with, and are lessened. The tension of the valves during the systole will, under these circumstances, be not sufficient to occasion much sound, for the intensity is in proportion to the excursive movement of the valves. In anæmia the sound is intensified. In cases in which there is a presystolic murmur, and the sound is more intense, it shows that the curtains of the valves adhere to one another, leaving a buttonhole opening. In these cases the action of the valves is strong, and there may be no systolic murmur.

Impulsion sound. This generally predominates very much in healthy persons. It may be increased, decreased, or lost. As it is an ex-cardial sound, and is not transmitted, it is heard over only a limited area. It has a specially booming character in hypertrophy. It is diminished in fatty degeneration and in softening of the tissues of the heart, in fevers—when it serves an important purpose in indicating the need of stimulants, etc. In pericarditis, it is lost during the stage of effusion. In these cases, the aortic sound may be louder at the apex than the mitral.

Tricuspid sound. Weakness of this sound is of slight importance. A thrombus in the right ventricle has been known to extinguish the sound altogether. In hypertrophy of the right ventricle it is intensified, and this is a better sign of this condition than the increased inten-

sity of the pulmonary sounds, since that depends so much on the variations in the blood-pressure in the pulmonary artery. Disease of this valve is rare, except as a congenital trouble.

DR. F. C. SHATTUCK noticed that Dr. Flint ignored the muscular element in the production of the first sound, which is regarded as so important by many. There is a difficulty in the theory that contracting muscles make appreciable sound. In hypertrophy following aortic disease, the first sound is sometimes wanting.

DR. JAMES C. WILSON, of Philadelphia, said that, in Germany, emphasis had been laid upon the study of heart *sounds* as well as of murmurs, and referred to the work of Felix v. Niemeyer. There is some doubt as to the part played in the production of the first sound by the contraction of the muscles.

DR. RICHARD MCSHERRY, of Baltimore, entered into the consideration of the general progress of exactness in our methods of diagnosticating cardiac affections, from the time when the stethoscope was called a "divining rod" by the old physicians, to the present day.

At this period the announcement of the death of PROF. S. D. GROSS, of Philadelphia, was made, and a motion was put to adjourn out of respect to his memory. Prof. A. Flint said that he had been intimately associated with Prof Gross for many years, and felt sure that he would be the last man to wish the proceedings of this convention to be suspended. The motion was lost.

DR. GARLAND, of Massachusetts, spoke of the importance of eliminating the effect on cardiac sounds of the respiratory movements. In cases of any doubt always examine the heart during forced inspiration and forced expiration.

DR. DONALDSON, of Baltimore, thought it doubtful whether impulsion could be considered a *sound*. It adds to the intensity, but is hardly a sound *per se*. He denied the muscular element in the production of any sound capable of being heard by ordinary methods. He then entered at length upon the origin of the presystolic murmur, which he was rather inclined to consider, with Leaming, to be produced at the commencement of the systolic sound, and not by the contraction of the auricle, which was so slight and weak.

DR. JANEWAY, of New York, said that in cases in which there was a presystolic murmur, the auricle was hypertrophied and its contractions were therefore stronger—there was also felt a presystolic thrill.

DR. J. S. LYNCH did not agree with Dr. Flint in regard to the absence of increased aortic sound in cases of contracted kidney. He noticed that Dr. Flint assumed increased tension in the pulmonary artery to be the cause of increased intensity of the pulmonary sound. Why, therefore, did he deny a similar cause in the production of an increased intensity of the aortic sound? He also noticed that Dr. Flint had taken no account of the systolic vibrations of the aorta in the production of the first sound of the heart. It was this, Dr. Lynch thought, that gave the first sound its booming character.

DR. FLINT said that he would not reply to the remarks that had been made as to the cause of cardiac murmurs, nor even to the cause of cardiac sounds, as time was limited and he had confined himself to clinical questions exclusively. In regard to Dr. Lynch's objection to the inconsistency of denying increased pressure in the systemic arteries to be a cause of increase in the intensity of the aortic sound, he had no explanation; he based his conclusions on clinical facts.

DR. LOUIS A. DUHRING, of Phila., then read a paper on

DERMATITIS HERPETIFORMIS.

Under this name Dr. Duhring described a most protean form of skin disease which had hitherto been classed under numerous different names, and had often been left nameless. One form of it had been described by Hebra as impetigo herpetiformis, as a rare and grave disease of which Hebra had had five cases, four of which had died. This, however, was only one form of the disease. In Dr. Duhring's hands the disease, while very intractable, had never ended fatally. He described several varieties, as the pustular, the vesicular, etc. As the disease is so protean in its forms, and certainly herpetic in character, he considered the name he had adopted answered it the best of any. All forms have certain things in common; there are malaise and considerable constitutional disturbance for several days before the appearance of the eruption and intense itching, which continues till the lesions have been ruptured. There is considerable febrile action. The eruption appears mostly over the anterior part of thighs and trunk. It is confined to neither sex, but appears mostly in adult life. It is certainly a systemic disease, and is very intractable and extremely liable to recur.

The next paper was on the

ETIOLOGY OF PERICARDITIS,

by DR. JAMES WHITTAKER, of Ohio. This disease is more often overlooked than suspected, and it is often latent, owing to the fact that frequently the local symptoms are slight, and where there is no history of rheumatism it is apt to be overlooked. Rheumatism is the most frequent single cause, but it does not cause the majority of all the cases. Of the frequency of pericarditis, the author quoted statistics showing that about four per cent. of autopsies give evidence of the existence of pericarditis, which is really higher than the proportion of endocarditis; clinically, endocarditis would seem to be more common. Pericarditis should not be classified as primary and secondary, but as mechanical and infectious—the first arises from injuries and from extension of inflammation from contiguous parts, etc.; the second, which is the true pericarditis, occurs in diseases dependent upon the existence of a microörganism. Rheumatism heads the list, then pyæmia, septicæmia, typhus and typhoid fevers, scarlatina, etc., malignant dysentery, cholera—in short, all diseases that have a mycotic origin. Three cases have been reported as occurring after vaccination. Infantile pericarditis has generally been referred to puerperal disease in the mother having extended to the child. It proves fatal in the first sixteen days of life. Endocarditis is frequently associated with pericarditis. The treatment medicinally should be anti-mycotics, cold, and rest.

DR. PRENTISS'S paper on *The Pharmacopœia* was, on account of the sickness of the author, read by title and referred to the Publication Committee.

DR. G. V. BLACK, of Illinois, read a paper on the

PRODUCTION OF POISONS BY MICROÖRGANISMS.

The association of certain germs with many diseases is pretty certain, but how they cause or modify disease is not explained. The author proceeded to show how

in all living things—plants and animals—there must be digestion, effected by some fluid secreted by the organism which will act as a solvent—there must be absorption of this material and appropriation of it to the needs of the life, and then the throwing off of the waste material. He said that in all forms of life (except the egg and the seed) excretion was of two kinds—one corresponding to the respiratory execution, which was rich in oxygen, and one corresponding to urea, which was poor in oxygen. In the yeast plant there are, *e.g.*, the carbonic acid, which is the respiratory excretion, and the alcohol, which corresponds to the urea. In plants the alkaloids, which are deposited in the unused part of the tree, are the true analogues of urea in man. The higher plants consume the smallest amount of food in proportion to the amount of structure building; they, therefore, excrete little. The case is just the reverse with the lowest forms of vegetable life. This general process he called remolecularization. These excreta are generally poisons to the animal or vegetable excreting them. But the poisonous character of the microörganisms varies as do the alkaloids found in trees and plants. The poison in the microörganisms corresponds to the alkaloids in trees and plants. It is their excreta that renders them dangerous. Before their true effect on the organism can be known, these excreta must be separated and analyzed.

Dr. Traill Green, of Penna., then read a paper on

THE NEW CHLORATE,

in which he praised the chlorate of sodium, thinking it superior to the potassium chlorate in every case in which the latter is useful, as being more soluble and far less irritating to the stomach. It can be given in larger doses, and, therefore, is more efficacious. As a local application in poisoning from the mercury vine, in the proportion of 4 to 12 grammes to 500 cubic centimetres of water, it is most satisfactory; also as a local wash in scarlatina. In conjunctivitis, and in irritations of mucous membranes ending in the skin (piles, etc.), it is most soothing. He thought the sodium salts in every way preferable to the potassium salts, and illustrated the difference in the irritating qualities of sodium and potassium salts, in the use of bicarbonate of sodium in burns, which answers well, while no one would think of using bicarbonate of potassium for the same purpose. In conclusion, he said that if any physician would try the effect of substituting sodium chlorate for potassium chlorate in his practice for one month, he felt sure that they would discard the potassium for the sodium. He had seen a case of angina yield to sodium chlorate that had resisted the potassium salt.

Section on Surgery.

The Surgical Section assembled at 2.30 P.M., with C. T. Parkes, M.D., of Chicago, in the Chair.

On motion of Dr. Keller, of Arkansas, it was decided to limit each speech in the discussion of the several papers to five minutes, speakers to have a second hearing only by consent of the Section.

The only paper read was that of Dr. Frederick S. Dennis, of New York, on the

TREATMENT OF COMPOUND FRACTURES.

In advocating any special kind of treatment, the speaker said, there are several salient points to consider. First, the method should be a safe one, and proved to be such by the crucial test of experience. Second, it should yield results unattended by any septic infection, by shortening, and by deformity. Third, it should be a simple one, unaccompanied by compound splints and cumbersome apparatus.

As essential for the attainment of good results, by whatever method, the author gave these rules: Immediate fixation, absolute cleanliness, and arrangements for thorough drainage when necessary.

Immediately after the injury has been sustained, he said, the wound should be carefully washed with a solution of carbolic acid, or irrigated with a solution of the bichloride of mercury, and the plaster-of-Paris bandage immediately applied. The bone, if it protrudes and cannot be reduced, should be sawn off with the chain-saw. A fenestrum is cut through the bandage to permit free drainage. This was the method employed by the author, and from its use he reported that primary union had occurred in a number of cases, without a sign of suppuration, and without the use of a fenestrum in the bandage. When suppuration does occur, however, the keynote to success is to keep the parts free from septic irritation, which is accomplished by free drainage and frequent cleansing with antiseptic solutions. When the granulating surface is pale and unhealthy in appearance, a poultice sprinkled with red cinchona bark should be applied. When the parts are healthy, iodoform may be used.

The author then defined what is meant by a compound fracture, stating that the entrance of air to the seat of fracture is an essential condition to its definition, and that, hence, the wound through the soft parts is produced by the injured parts within pushing out. The difference in the manner of union of simple and of compound fractures was treated of. In submitting his report to the Section, the author said that he would endeavor to show that the result was at least as good as that obtained from any other plan of treatment. It was unattended in any case with non-union and deformity, and his records, as regards shortening, were as satisfactory as any, and during the process of repair there was as little disturbance of health as was found in any plan of treatment.

The speaker then reported 128 consecutive cases of compound fracture of various parts of the body, with a tabular statement of the results. The report may be summarized thus: Compound fractures of skull, 22 with 6 deaths. Of the 16 recovering, 10 were trephined. Compound fractures of thigh, 3; leg, 48; arm, 10; forearm, 13; lower jaw, 8; hand and foot, 19; ribs and nasal bones, 4; miscellaneous cases, 30. Deducting from these cases those who died from shock or within forty-eight hours after injury, he had 95 cases without a death. This mortality was lower, he showed from statistics, than that reported from treatment by the strictest antiseptic Listerian method.

Just at the close of the reading of this paper, the President was handed a telegram containing the sad intelligence of

THE DEATH OF DR. S. D. GROSS.

On motion, a committee was appointed to draft resolutions upon the death of the esteemed member, and the Section was adjourned until Wednesday afternoon.

SECTION ON OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY.

DR. J. F. CHISOLM, *Chairman*, called the Section to order, after which the first paper was announced, viz.,

NEOPLASMS OF THE LACHRYMAL GLANDS,

by DR. P. D. KEYSER, of Penna. He stated that he believed this disease to be of very rare occurrence, and, having had two interesting cases lately, he wished to give some of the results of his study of them. He then described the first one, in which the patient (aged fifty-five years) was found to have an almond-shaped lump over the eye-ball, which it pushed down, and pressure on which occasioned some pain. It had existed for several years. Vision 20.20 (old notation). Tumor diagnosticated as enlarged lachrymal gland. On removal it was one inch and a half in length by the same in depth, and twice the normal thickness.

Microscopical examination showed the new growth to spring from the centre of the gland, while the outer portion showed inflammation cells only.

After the lapse of two years, there had been no return. The study of these tumors, microscopically, was of interest as helping to decide the question of their origin; some writers maintaining that they always started in the gland itself, while an external origin, gradually invading the gland, was probable from some cases observed.

The second case was then described; patient aged forty-seven; tumor raising upper lid so that it could not be closed; pupil slightly contracted; vision 20.20; no pain whatever. At a later examination the tumor felt hard and firm; local applications had no effect. It was then removed, and Dr. Seiler made a microscopical examination of it. This showed numerous round-cells and a stroma, but no alveolar cells. A purely fibrous capsule enclosed the growth. This was in May, and by October of same year a second growth had appeared, twice the size of first.

This showed a different structure from the first, and was pronounced a round-cell sarcoma; no capsule found. A *third* growth ultimately formed in the same eye. The speaker said that these growths, when confined to the gland, gave a sure prospect of recovery by removal, but, extending into surrounding tissues, were apt to return.

DR. WILLIAMS spoke of the permanent ptosis which was apt to follow on the removal of these tumors, and had himself sometimes been inclined to attribute it to inadvertent cutting of the levator palpebræ. He thought the disease very rare.

THE CHAIRMAN stated that he had seen four or five of these growths, mostly of a malignant character, and related one case in which, in a young woman of twenty-three, it had existed from childhood, pushing the eye out so slowly that vision had been retained, though impaired. Microscopic examination showed calcareous deposit.

DRS. BURNETT and THOMPSON took part in the discussion, the latter describing a growth of the gland which returned rapidly after removal; the second tumor was hard, and squeaked under the knife. This was pronounced scirrhus by a microscopist in Indiana, but he believed this opinion to be incorrect.

DR. E. WILLIAMS, of Ohio, then read a paper on

DIAGNOSIS IN OPHTHALMOLOGY.

He spoke of the importance of thorough preparation on the part of medical men for the practice of this branch of medicine. He believed that no physician was qualified to practise in a special department without a broad general study as a ground-work. He gave a feeling account of the injury done to the public by ignorant pretenders in the science of ophthalmology, and eulogized the American Medical Association for its action in ruling out all advertising quacks. He believed that the remedy lay in greater care on the part of private physicians in recommending students as proper persons to study medicine. The colleges of the country were also to blame, he thought, as they too frequently "ground out from the screenings" material for the medical profession which might have achieved success in the mechanical arts, but made poor doctors. A more general knowledge of the principles of the science would also deter "general surgeons" from ophthalmic surgery, when not qualified for successful practice in that line.

Dr. Williams then referred at length to the important connections of disease of the eye with other general disorders, instancing retinitic albuminuria, ophthalmia neonatorum, and eye symptoms in disease of the brain and spinal cord.

He then described a case of sudden loss of sight in the right eye by a single lady who had just passed the climacteric period, which, with the hemorrhage detected in the affected eye, he attributed to the cessation of the catamenia, and consequent disturbance of the system. In internal strabismus of long standing he had made a rule to refuse to operate; incurable diplopia was likely to follow.

DR. KEYSER stated that he had operated with success in long-standing strabismus by cutting out a piece of the paralyzed rectus externus, and joining the severed ends.

DR. SAMUEL D. RISLEY, of Pennsylvania, then read a paper on

SYMPATHETIC NEURO-RETINITIS, WITH REMARKS,

in which he related the rise and progress of a typical case. This paper brought out an extended discussion, in which a number of the members joined, and all referred to the importance of sure guides to the ophthalmic surgeon in cases of threatened injury to a sound eye by spread of inflammation, and elicited somewhat divergent views on the subject, according to the individual experience of the speakers.

DR. STEVENSON related a case in which, by "sympathetic" irritation, inflammation was transmitted to the brain and meninges with fatal result.

DR. WILLIAMS spoke in favor of a conservative policy in these cases. He believed that harm had been done by a too sweeping application of the preventive treatment by enucleation; an eye might be saved that would be much better than no eye at all.

DR. WM. S. LITTLE related a case in which a patient stubbornly refused to submit to enucleation of an injured eye, became blind, as his surgeon predicted, and subsequently *recovered* the sight, the inflammation subsiding and leaving a useful eye. He has generally refused to operate in old people for "subjective traumatism" after injury sustained long before.

Dr. Thompson thought that while in addressing ophthalmologists of special training, these views might do no harm, yet he thought that the general public should not be treated with high-colored accounts of recovery after refusing to submit to operation as advised by the eye-surgeon, lest false inferences might gain ground to the detriment of ophthalmic surgery.

Dr. Hobby then related a case that had come under his care, and a portion of the time under Dr. Young's. He operated for relief from pain from the effects of a past iritis. The eye became subsequently violently inflamed, and, as the patient lived far from surgical aid, it was decided not to wait for sympathetic irritation but to enucleate. Pain set in in the other eye, which was relieved by broad iridectomy. He believed that when, at the earliest indications of sympathetic irritation, enucleation was made without preventing trouble, we should be taught not to wait for this irritation before operating.

Dr. Seely, of Cincinnati, said that he was glad to find that the gentlemen in this discussion repudiated the idea of an occult sympathy as causing this trouble, such "sympathy" being formerly a term to cover ignorance, and unwarranted by any analogy in pathology or medicine. It was not *sympathy*, but *transmitted disease*. In speaking against the needless removal of an injured eye, Dr. Little had exactly expressed his views. An eye might see well enough to guard its possessor against danger from a coming carriage, etc., though not capable of more distinct vision.

Dr. Carl Seiler, of Phila., then read a paper on the

USE OF MINERAL WATERS IN CATARRHAL AFFECTIONS OF THE MUCOUS MEMBRANE OF THE UPPER AIR-PASSAGES.

There are at Cresson three springs. 1. One a very strong iron spring, which, according to the analysis made by the Pennsylvania State Survey, ranks with the best so-called steel springs of Europe. 2. A ferruginous alum spring and a weak magnesia spring. These waters he used on a number of patients suffering from chronic catarrhal inflammation of the upper air-passages in the form of sprays applied locally to the diseased mucous membrane, and the iron and magnesia waters internally with proper regulation of the diet of the patients. He found that the ferric alum water had a decided tonic and stimulating effect in those cases of atrophic nasal catarrh which were complicated with pharyngitis sicca and chronic laryngitis, and that the beneficial effect of the local application was very soon apparent.

The iron water he found to have no very decided effect upon these cases, but to be of great value in cases of follicular pharyngitis, and in the milder forms of hypertrophic nasal catarrh, as well as in cases of ordinary simple chronic laryngitis and bronchitis. The magnesia water locally applied gave no results whatever, but he found it a valuable adjuvant in the treatment of patients suffering from lythæmic inflammations of the mucous membrane of the upper air-passages. In these cases the patients were directed to drink the water freely, and its slightly diuretic effect soon became apparent. The iron spring also is somewhat diuretic in its action, but is chiefly valuable as a tonic, particularly in cases with feeble digestion.

The Chairman here said that it was his painful duty to announce the

DEATH OF DR. SAMUEL D. GROSS.

After a resolution expressive of their sense of the loss thus sustained, the Section adjourned.

Section on Obstetrics and Diseases of Women.

The Section met at 2.30 P.M., The Chairman, Dr. T. A. Reamy, of Cincinnati, presiding.

Dr. R. S. Sutton, of Pennsylvania, presented a paper on

DESPERATE SURGERY AMONG WOMEN; THE PROPER FIELD FOR IT; WHO SHOULD AND WHO SHOULD NOT ATTEMPT IT.

Desperate surgery, he said, means operations endangering life, and in women it is chiefly intra-abdominal. Its dangers are not to be denied, as is shown by American statistics. The proper place for these operations is not in the general hospital with its pus-soaked walls, or the modern dwelling with its defective sewage, or roadside cottage with its health-bringing air; there cannot be found the indispensable nurse, and the surgeon may be a league away. These conditions render such a locality unavailable.

The material elements of safety are: Large airy apartments, no zymotic germs, sun and air space, perfect sewage, quiet city neighborhood, a conscientious nurse, but necessarily a trained one, and the surgeon near his patient. All of these conditions are secured in a private hospital, and with them we can equal the success of Keith or Tait, by whom they are practised. Statistics show that the best results are obtainable in a private or special hospital.

The general practitioner who is exposed to the poisons of scarlatina, diphtheria, and erysipelas, is not warranted in assuming the responsibility of these operations, and by so doing destroys life and makes himself liable to criminal prosecution. The obstetrician encountering puerperal peritonitis and other zymotic diseases, has no right to imperil a woman's life. The gynecologist may be the minister of death whilst attending a case of uterine cancer. The clothing of the practitioner from exposure to infective diseases may be the deadly agent. The history of the past and the judgment of the present decide the operator to be a specialist, and exclude him from general practice. Dr. Sutton concluded with the assertion that, for successful abdominal surgery, the absence of all zymotic disease poison, and the presence of perfect cleanliness and good nurses are essential.

Dr. Engelmann, of St. Louis, then spoke of the importance and difficulty of blending theory and practice. He thought that Dr. Sutton's views are theoretically true. The late Dr. Hodgen, an acknowledged able surgeon, lost most of his ovariotomies. He attributed it to the fact of his having at the same time practised general surgery and medicine. He thought that the chief law of success—"absolute cleanliness," was necessary; and that it was best carried out in a private hospital. He had seen an influx of sepsis, apparently from the presence of a single gentleman at an operation, conveyed to the patients that had been and were operated on in a hospital where the most severe abdominal operations had resulted previously in but a slight or no rise of temperature. Dr. Engelmann insisted on the greater value of a "cleansed" than of a trained nurse.

The specialist endangers the success of his operations when he must take the general practitioner as his assistant. If the specialist can achieve absolute cleanliness, he must do it. Even in the English hospitals there remains much to be improved. The private hospital of Dr. Martin is by no means a model one, and he thought his success had been due entirely to skill and cleanliness. Dr. Martin's new hospital is to have a room for major and one for minor operations, and will be so constructed as to be easily flooded, when necessary, with a proper disinfectant.

DR. DUNLAP referred to his experience of over forty years, and said that, theoretically, the statements contained in the paper are true. One of the main factors of success had been, however, omitted. This is the condition of the patient's mind when removed from her home and left in a hospital. He insisted on the importance of the woman's conviction of recovery after the operation, and did not think the practitioner a walking magazine of death and destruction; yet he is careful of cleanliness, the value of the purifying influence of the air in removing the poisons of infectious diseases that may have penetrated the clothing. During 1881–2, almost every one of his ovariotomies died. He lost three cases in succession. Since March, 1883, he has operated twenty-two times, with but two deaths. One of these was in a woman of seventy years; the other, sixty-four and broken down. He is particular to thoroughly clean the wound, and treat his hands and instruments in the same manner. He favors the semi-reclining posture for the patient, which is of great importance for drainage. He does not favor the use of carbolic acid in the abdominal cavity, because it prevents the natural absorption of poured-out fluids; at the same time it often interferes with healthy kidney action.

In answer to a question as to the cause of the severe mortality mentioned, he said that he thought it due to atmospheric influences passing over areas of country. His other operations in general surgery had been also unfavorable at that time.

At 3.40 P.M., the

DEATH OF DR. S. D. GROSS

was announced, and, in honor to the memory of the great surgeon, the Section took a recess.

Upon reconvening, DR. QUIMBY, of Jersey City, referred to the two extremes of treatment and precaution advised in this operation. He takes a middle ground. Believing want of cleanliness one of the greatest dangers, he does not consent to set these operations apart as the work of special persons. During an epidemic of smallpox, he had attended cases of confinement with the only precaution of changing the clothing, and attending his obstetric patients last. Cleanliness of hands and hair was also practised, and he failed to observe any disastrous results.

In reply to an inquiry of Dr. Sutton, he said that he had opened the abdominal cavity six or seven times, with a mortality of three.

DR. SUTTON, in conclusion, said that the statement of the low foreign mortality and its causes had not been refuted. His own first seven cases were fatal. After having observed the practice abroad for eighteen months, and having again had four failures in succession, he perceived his error and opened a private hospital. His seven ovariotomies therein performed have all been successful, and his highest temperature rise has been 101.5 F.

DR. J. TABER JOHNSON, of Washington, then read a paper on

THE EFFECTS OF TRACHELORRHAPHY.

He wished to draw attention to the immediate and the remote effects of the operation.

In some cases the operation is unwisely or unskilfully done, or oftener than is needed. Emmet now does one operation where formerly he would have done ten. This is because he first attempts the cure of endometritis or endocervicitis. In having the unfortunate result of a complete stenosis of the cervix, the fault is with the operator, not the operation. The frequency of laceration is not increased. When the operation is indicated and well performed it is one of the greatest operations of the age.

DR. GARCELON, of Maine, endorsed several of the author's points. The operation has no effect on pregnancy and conduces to fertility. There are two important reasons for performing the operation: 1. It reduces uterine hyperplasia; he operates in all cases of increased growth whether a laceration exists or not. 2. The scissors must be very sharp; one cut for each side suffices. 3. The parts must be absolutely approximated.

DR. WOODWARD, of Vermont, avoids pelvic cellulitis by digital examination; if on any part of the vaginal surface tenderness is produced, he does not draw the neck towards the vulva, as is usually done, but operates with it *in situ*.

THE CHAIRMAN, DR. REAMY, said that we ought to operate in all perceptible lacerations, and do so without awaiting the appearance of symptoms. Epithelioma is seen in its frequency and analogous causation on the lower lip of men. He was of the opinion that Emmet is forsaking his most brilliant operation.

WEDNESDAY, MAY 7TH—SECOND DAY.

The Association was called to order at 10 A.M., by the PRESIDENT, who announced, in affectionate terms,

THE DEATH OF DR. S. D. GROSS,

and appointed the following committee to consider and report what action should be taken by the Association thereon: Drs. T. G. Richardson, of Louisiana; L. A. Sayre, of New York; J. H. Packard, of Philadelphia; F. H. Hamilton, of New York; Moses Gunn, of Chicago; W. T. Briggs, of Nashville; and I. Minis Hays, of Philadelphia.

THE PRESIDENT then announced the following as the committee to consider the propriety of inviting to meet in the United States in 1887

THE INTERNATIONAL MEDICAL CONGRESS:

Dr. J. S. Billings, of U. S. A.; Dr. L. A. Sayre, of New York; Dr. R. H. Fitz, of Mass.; Dr. I. Minis Hays, of Philadelphia; and Dr. H. F. Campbell, of Georgia.

Also the following

COMMITTEE ON THE RECOMMENDATIONS CONTAINED IN THE PRESIDENT'S ADDRESS:

Drs. N. S. Davis, W. W. Dawson, W. T. Briggs, T. F.

Prewitt, D. W. Stormont, J. L. Cabell, and H. B. Ransom.

The following were then announced as having been appointed to constitute the

NOMINATING COMMITTEE:

Alabama, Jerome Cochran. *Arkansas*, P. O. Hooper. *California*, F. W. Hatch. *Colorado*, Jesse Hawes. *Connecticut*, G. L. Porter. *District of Columbia*, J. W. H. Longjoy. *Dakota*, H. Galloway. *Delaware*, W. Marshall. *Illinois*, E. P. Cook. *Indiana*, J. B. Haney. *Iowa*, H. C. Huntsman. *Kansas*, F. F. Dickman. *Kentucky*, W. H. Mather. *Louisiana*, T. G. Richardson. *Maine*, F. C. Hayes. *Massachusetts*, Charles H. Savory. *Maryland*, J. S. Lynch. *Mississippi*, B. A. Duncan. *Minnesota*, D. Leassure. *Missouri*, N. F. Essig. *North Carolina*, C. J. P. Hague. *New Hampshire*, S. P. Mercer. *Nebraska*, J. W. Parsons. *New Jersey*, Joseph Parrish. *New York*, J. W. S. Gouley. *Ohio*, W. M. Beach. *Pennsylvania*, J. B. Murdoch. *Rhode Island*, J. H. Eldridge. *South Carolina*, William Huger. *Tennessee*, J. H. Pope. *Vermont*, H. D. Holton. *Virginia*, Alexander Harris. *West Virginia*, George Beard. *Wisconsin*, William Fox. *U. S. Army*, J. R. Smith. *U. S. Navy*, N. S. Bates. *U. S. Marine Hospital*, Walter Wyman.

The report of the Committee on Resolutions to secure more competent

MEDICAL AND SANITARY SERVICE ON BOARD TRANS-OCEANIC PASSENGER VESSELS

was read by A. N. BELL, M.D., Chairman. The report was briefly as follows: After conference, correspondence, and due deliberation, a bill was prepared and introduced by the Hon. Henry W. Slocum. The report referred to the contrast existing between the percentage of deaths on sea during the four years ending with 1873 and the four ending with 1883. During the former period there were 1,064,180 passengers carried, and 1333 deaths, or a percentage of .73 per cent. per thousand of the total number. For the corresponding period ending with 1883, the passengers numbered 1,127,215, the deaths reaching 1558, or .85 per cent. per thousand. This difference of .12 per cent. means that 225 lives would have been saved in the latter period had the sanitary conditions in that period been as good as in the former. In conclusion, he stated that the mortality is now three times as large as it should be, or would be, if the sanitary conditions of vessels were properly provided for.

DR. PRATT, of Michigan, moved that the report be accepted, and the committee be continued, to report one year from the present time.

DR. IRVIN spoke at great length upon the manner in which a similar bill is working in England, where he said that he was the first agitator of the movement.

The report was received and the suggestion adopted.

DR. PRATT then presented the following:

Resolved, That the American Medical Association, now in session, urges upon Congress the necessity of providing suitable legislation to secure the well-being of immigrants coming to this country, and to protect our own public health.

THE ADDRESS IN MEDICINE,

by the Chairman of the Section of Practical Medicine, DR. J. V. SHOEMAKER, of Philadelphia, was then read. The Address was referred to the Section on the Practice of Medicine.

Drs. Battsford and Stevens,

DELEGATES FROM THE CANADA MEDICAL ASSOCIATION,

were invited to seats on the platform.

DR. THADDEUS A. REAMY, of Cincinnati, the Chairman of the Section on Obstetrics, then delivered

THE ADDRESS IN OBSTETICS.

(See p. 530.)

EXPERIMENTAL MEDICINE.

The following resolutions were then presented by Dr. Henry H. Smith, of Pennsylvania, on behalf of Dr. H. C. Wood, of Philadelphia.

Whereas, It appears that an effort is being made to restrict, by legislative action, the practice of investigation in medical science by experiments on animals, and,

Whereas, In the opinion of this Association, such restriction is not needed for the guidance of medical men in their investigations, and would be an injury and a hindrance to the pursuit of knowledge and the improvement of the medical art, therefore,

Resolved, That a standing committee of seven be appointed by the President of the Association, to be known as the Committee on Experimental Medicine of the American Medical Association, charged with the duty of opposing, by all legitimate means, any interference with the progress of medical science by unwise or ill-considered legislation.

DR. KEYSER, of Philadelphia, explained the methods of procedure adopted by the antivivisectionists of his city, and the cards sent to physicians by them.

DR. DALTON, of New York, spoke of the movement in Philadelphia, and showed the absurdity of the position occupied by the antivivisection agitators.

The resolutions were then adopted by a unanimous vote.

THE CHAIR then announced, as the committee called for in the resolutions: Drs. Horatio C. Wood, William Pepper, James Tyson, of Philadelphia; Christopher Johnston, of Maryland; J. C. Dalton, and Austin Flint, Jr., of New York; and J. S. Billings, of U. S. Army.

MEDICAL ADVERTISING.

DR. ATWOOD offered a memorial with reference to the methods of advertising now pursued by our colleges. He said that if it is reprehensible for the physician to advertise, it is equally so for an association of physicians. He claimed that great harm is done by the advertising of free dispensaries, and he regretted deeply that so many men of *inferior* attainments, connected with colleges, succeed in practice above their superiors who are not so fortunate in position. Adopted.

ELEVATING THE STANDARD OF MEDICAL EDUCATION.

A resolution was offered recommending that the colleges all require a preliminary examination of applicants for admission, a course of three years, and a thorough final examination, including tests of skill in

various departments. After some discussion, a motion to lay the resolution on the table was made, but lost. Finally, the resolutions were adopted.

DR. PACKARD, of Philadelphia, moved that the Association take up for consideration, after the addresses for Thursday morning, the

AMENDMENTS TO THE CONSTITUTION

offered and laid on the table at the meeting of the Association at St. Paul, two years ago.

THURSDAY, MAY 8TH—THIRD DAY.

GENERAL SESSION.

The Association was called to order by the PRESIDENT at ten o'clock.

TIME OF ANNUAL MEETING.

DR. KELLER, of Arkansas, called attention to a mistake made by the Secretary. A few years ago when he introduced a resolution leaving the date of the annual meeting at the option of the Association, instead of restricting it to the months of May or June, this resolution had been laid on the table for a year or two, but at the last meeting it was unanimously passed. He had been informed that the Secretary had instructed the Nominating Committee that this resolution had not been adopted. He therefore moved that the Secretary be instructed to correct the mistake.

The Committee appointed at the last meeting to petition Congress to provide a suitable

FIRE-PROOF BUILDING FOR THE SAFE-KEEPING OF THE ARMY MEDICAL MUSEUM AND LIBRARY,

reported that they had presented to Congress resolutions setting forth the present inadequate protection provided for these valuable collections, and asking prompt action on the bill introduced, but no action as yet had been taken. An appropriation of ten thousand dollars per annum was also asked for the support of the library, and five thousand more for the publication of the catalogue. The report was adopted and the committee continued.

DR. GEORGE M. STERNBERG, U. S. A., moved that

"We earnestly petition Congress to make suitable appropriations for the prosecution of scientific researches relating to the

CAUSES AND PREVENTION OF INFECTIOUS DISEASES OF THE HUMAN RACE,

to be expended under the direction of the National Board of Health, and that a permanent detail of one medical officer of the Army and one of the Navy be authorized for the prosecution of researches of this nature.

"*Resolved*, That a committee of five be appointed to present copies of this resolution to the Speaker of the House, to the President of the Senate, and to the Chairmen of the Committee on Public Health of the House and of the Senate." Adopted.

Drs. G. M. Sternberg, I. Minis Hays, A. H. Gihon, J. E. Reeve, and John C. Dalton were appointed as the committee.

DR. KELLER asked attention to a resolution in regard to

CREMATION,

offered by him in Cleveland, and referred to a committee to which was also referred that part of the President's Address regarding the invitation to

THE INTERNATIONAL MEDICAL CONGRESS

to meet in 1887 in this country. The committee reported that they found the sentiment almost unanimous in favor of the invitation. It was therefore recommended that a committee of seven be appointed to present an invitation at Copenhagen, and, if accepted, with power to make all necessary arrangements, and the committee was authorized to draw upon the Treasurer for the preliminary expenses, not exceeding five hundred dollars. They also suggested Washington as the place of meeting.

DR. J. M. TONER presented the

REPORT OF THE BOARD OF TRUSTEES OF THE ASSOCIATION JOURNAL.

The contract for publication had been given to Newell & Co., of Chicago, and by a fortunate coincidence the editor chosen resided in the same city. The *Journal* had been commenced, and although like all new undertakings it had been somewhat trammelled by lack of funds, its good effect had been largely felt in stimulating members of the Association to pay their dues, and in largely increasing the income of the Association. He further believed that the present year would end with a surplus in the treasury. He then called upon Dr. N. S. Davis, the editor, to make his report.

DR. DAVIS reported that arrangements had been made for the publication of the *Journal* immediately after the last meeting, but that on account of unavoidable delays the *Journal* was late in appearing, and was a little late in its issue during the first three months. In accordance with the estimates made last year, 3500 copies were printed at each issue, but before the fourth issue the number was increased to 3800, and had been continued at that rate until the present time. The total weekly circulation is 3436, of which 2171 go to members. Of subscribers for the present year, 650 have paid, leaving 552 who have not paid. It is thus seen that the circulation has considerably exceeded the estimate made. Immediately after the meeting of the Association in Cleveland, circulars were sent to all the medical schools of the country, large drug manufacturing houses, and medical book publishers. In reply, a large number of advertisements was received, but many of them were of such character as to be precluded by the rule adopted by the Board of Trustees. Notwithstanding the restriction alluded to, quite a number of page advertisements were accepted. The income from this source for the first three-quarters of the year was about $1000; and at the end of the fourth quarter it should reach over $1200.

For the first nine months the total income was $10,345. This might be somewhat reduced by losses, etc. The total receipts from subscribers was $2293. On account of the fact that certain subscribers paid but four dollars each, the other dollar being paid to the person securing the subscription, there might be an apparent discrepancy in the figures between the number of subscribers and the amount received therefrom. If all advertisements be paid for, the total receipts would be $18,547.50; the total amount drawn from the Treasurer of the Association for publication purposes was $8171.26; that would make annual expenses $10,891.25, leaving a balance in the treasury of $1650.25

as result of the first year's publication. Deducting therefrom the necessary expenses of the Association, there will be over $500 still left in the treasury. As a result of the publication of the *Journal*, the number of members paying dues had been fully double that of any former year. On account of the need of a weekly journal west of the Alleghanies, a large proportion of the subscribers came from that section.

DR. J. M. TONER then resumed his report. In the opinion of the Trustees, the report of the editor showed the *Journal* to be in a satisfactory condition; it had been conducted with economy, ability, and judgment; the best interests of the Association had been kept in view, and its dignity maintained with rare discretion. It is believed that the experience gained during the past year, with the increased funds, will enable the editor to do better work in the future. If all the available funds were placed in the work of the *Journal*, the result would be seen in an even more satisfactory periodical. Early this year, Dr. Davis had presented his resignation, but after correspondence with the Trustees, he acceeded to their earnest request and withdrew it. Dr. Davis had informed them that while he would do the best he could for the *Journal* during the coming year, at the end of that period he would absolutely resign. Bids had been received for the publication of the *Journal* for the coming year from various firms, but the bid of the present publishers had been considered most suitable, and the publication had again been put in their hands.

DR. JOHN H. PACKARD stated, in presenting a minority report, that in no other way could he fulfil the duty resting upon him as one of the Trustees. He had no intention of reflecting on his colleagues, and was without hostility towards the present editor: he had no desire to hamper an enterprise in which for four years he had been warmly enlisted, and disclaimed any personal motive. From the majority report of the Trustees it would appear that the expenses of publication of the *Journal* had been met. He had, however, in the beginning of this year, received an official letter from the President of the Board in which he stated that the editor had not drawn his salary, and would abstain for some time from taking any; of this he expressed strong disapprobation. It was not only from a financial aspect that he dissented from the majority report. In his opinion the *Journal* has not approached anywhere near the standard to which the organ of the Association should attain. The defects of the *Journal* are not those consequent on a new enterprise, and are not decreasing.

The object of the *Journal* was not merely to journalize the transactions, not merely to spread out the minutes of the Association or papers read. The object is to make a strong, wide-awake, high-toned periodical, well equipped in every respect, to be a medium of communication between members all over the country. A thoroughly trained corps of editors is requisite; access must be had to large libraries, and where there is opportunity to secure auxiliary work such contributions should be liberally paid for. Facilities for mechanical execution are essential to real success. None of these requirements seem to have been possessed. Due respect for the interests of the Association compelled him to state this as his sincere and deliberate judgment. The report concluded by recommending that the resignation of Dr. Davis as editor be accepted, and that the publication office of the *Journal* be transferred to some eastern city, Washington, Philadelphia, or New York.

DR. HYATT then moved that the minority report be laid upon the table. The yeas and nays being called for, the roll was called, and the motion carried by 191 yeas to 74 nays.

A motion to adopt the majority report was then carried.

The Nominating Committee then presented the following list of

OFFICERS FOR THE ENSUING YEAR:

President.—H. F. CAMPBELL, M.D., of Georgia.

Vice-Presidents.—J. S. LYNCH, M.D., of Maryland; D. D. MERCER, M.D., of Nebraska; J. W. PARSONS, M.D., of New Hampshire; H. C. GHENT, M.D., of Texas.

Time and Place of Next Meeting.—New Orleans, on the last Tuesday in April, 1885.

Judicial Council, to fill vacancy, 1886, J. K. Bartlett, M.D., of Wisconsin.

To fill vacancies caused by expiration of term of service, J. H. Murphy, M.D., of Minnesota; J. M. Toner, M.D., of Washington; W. Brodie, M.D., of Michigan; H. D. Holton, M.D., of Vermont; A. B. Sloan, M.D., of Missouri; W. B. Ulrich, M.D., of Pennsylvania; W. M. Beach, M.D., of Ohio.

OFFICERS OF SECTIONS:

Practice of Medicine.—H. D. DIDAMA, M.D., of New York, *Chairman;* G. M. GARLAND, M.D., of Massachusetts, *Secretary.*

Obstetrics.—R. S. SUTTON, M.D., of Pennsylvania, *Chairman;* J. T. JELKS, M.D., of Arkansas, *Secretary.*

Surgery.—DUNCAN EVE, M.D., of Tennessee, *Chairman;* E. B. KING, of Pennsylvania, *Secretary.*

Ophthalmology.—JOSEPH A. WHITE, M.D., of Virginia, *Chairman;* EUGENE SMITH, M.D., of Michigan, *Secretary.*

Diseases of Children.—JOHN H. POPE, M.D., of Texas, *Chairman;* S. S. ADAMS, M.D., of District of Columbia, *Secretary.*

State Medicine.—E. W. SCHAEFFER, M.D., *Chairman;* J. M. MCCORMICK, M.D., of Kentucky, *Secretary.*

Oral and Dental Surgery.—A. W. HARLAN, M.D., of Illinois, *Chairman;* J. EWING MEARS, M.D., of Pennsylvania, *Secretary.*

Trustees of Journal.—H. F. CAMPBELL, M.D., of Georgia; J. H. PACKARD, M.D., of Pennsylvania; LEARTUS CONNOR, M.D., of Michigan.

Necrology.—J. M. TONER, M.D., of District of Columbia, *Chairman.*

The report of the standing Committee on Meteorological Conditions was presented by DR. N. S. DAVIS, Chairman.

THE AMERICAN SURGICAL ASSOCIATION.

Fifth Annual Session held at Washington, April 30, May 1, 2, and 3, 1884.

(Specially reported for THE MEDICAL NEWS.)

THURSDAY, MAY 1ST—SECOND DAY.

THE Association was called to order at eleven o'clock.

Reports of Committees being in order, DR. JOHN H. PACKARD presented the

TREASURER'S REPORT,

which showed a balance on hand of $1325.25.

THE END-RESULTS OF EXCISION.

DR. P. S. CONNER then offered the following:

Resolved, That a committee of three be appointed to obtain, so far as may be possible, reports relative to the end-results of excisions made for gunshot injury during the late war.

In the absence of DR. S. W. GROSS, of Philadelphia, his paper on

GASTROSTOMY, ŒSOPHAGOSTOMY, INTERNAL ŒSOPHAGOTOMY, COMBINED ŒSOPHAGOSTOMY, ŒSOPHAGECTOMY AND RETROGRADE DIVULSION IN THE TREATMENT OF STRICTURES OF THE ŒSOPHAGUS,

was read by Dr. J. Ewing Mears, and will be published in full in an early number of THE MEDICAL NEWS.

Dr. HENRY F. CAMPBELL, of Georgia, said that the paper was the best *résumé* upon the subject of operative measures in the treatment of œsophageal obstructions which we possessed. In his opinion, strictures of the œsophagus are, as a rule, not cicatricial, but tetanic from spasmodic contraction of the muscular fibres. Even in strictures produced by caustic alkalies, the cicatricial formation is exceedingly superficial, and the constriction depends mainly upon the muscular contraction excited by the irritation of the stricture. In order to dilate a contraction of this kind, the œsophagus must be taken by surprise. A large ball on the end of a whalebone only excites a more energetic contraction, but if a soft "rat-tail bougie" is passed down it acts somewhat as would a bolus of food. Almost immediately after the passage of a small bougie of this kind, fluids can be taken. Then after daily treatment in this manner for a week, a larger size of bougie may be used. A number of bougies of the pattern used by the speaker were exhibited.

In reference to the results of gastrostomy, he did not think the statistics very flattering, and he believed it better to allow the patient to die without undergoing this operation, since death is inevitable.

DR. JOSEPH W. THOMPSON, of Paducah, Ky., then read a paper on the

SURGERY OF THE HAND, ESPECIALLY AS APPLIED TO RAILROAD INJURIES.

He first spoke of the great importance of the hand, both in its function and as a means by which the intellect and genius of man is perfected. The progress which is being made in machinery carries with it increased perils to the hand, making it important that we should possess a thorough knowledge of the anatomy and surgery of that organ. Every resource of investigation should be brought to bear, in order to establish a conservative practice.

Attention was then called to the *inflammatory affections* of the hand, and the importance of prompt and free incision where swelling and effusion require it.

Wounds of the palmar arches are among the most difficult injuries we have to contend with. In this regard, the propriety of cautiously enlarging the wound so as to secure the injured vessels was discussed, and the importance of acute flexion of the forearm upon the arm was insisted upon. In *caries*, a free incision down to the bone will usually suffice; in necrosis, the detached portions of bone must be removed.

Resection of the metacarpal bones has proved a successful practice, especially when carried only to the extent of removing fragments of bone and smoothing sharp ends. Resection of phalanges, except of the distal row, is seldom admissible. In other cases, amputation is preferable. Excision of the carpal bones is of doubtful propriety, and can hardly be considered an established operation.

In amputation of the thumb, forefinger, and little finger, the stump should be made as long as possible, but a more useful hand is left by removing the middle and ring fingers at the metacarpo-phalangeal articulation. In this connection the essayist reported two cases of incised wounds, in which the hand was almost severed, and exhibited photographs illustrating the almost perfect repair attained in the functional movements.

In conclusion, antiseptic treatment of the hand was discussed. The author stated that in his experience, both as chief surgeon to the Chesapeake and Ohio and Southwestern Railroad, and in his private practice, he had found the properly applied antiseptic dressing act not only so as to prevent fermentation in the wound, but also as an anæsthetic, rendering the use of opiates usually unnecessary. It is his practice to use, for the first two dressings, about a two per cent. aqueous solution of carbolic acid, then to envelop the hand in absorbent cotton saturated with a ten per cent. solution of the acid in olive oil; a roller bandage being applied over this, and the dressing allowed to remain undisturbed from six to ten days.

In order to bring the subject of hand injuries more fully before the Association, the President called for the paper, by DR. JAMES MCCANN, of Pittsburg, entitled

CLINICAL OBSERVATIONS ON SEVERE RAILROAD INJURIES OF THE EXTREMITIES,

He referred to the variations in form and degree of the shock following injuries to different portions of the body. Attention was also called to the importance of not being deceived by the apparent cessation of the hemorrhage after a crushing injury, for the apparently slight oozing is often sufficient greatly to prolong shock or even cause death if uncontrolled.

Railroad injuries of the extremities were divided into two classes; the first comprising injuries involving skin, fascia, muscles, and bones, the nerves and larger blood-vessels escaping serious damage; the second including cases in which the nerves and vessels are all damaged, and the integrity of the limb destroyed. In injuries near joints the gravity of the case is greatly increased, also by its involving the joint, though never so slightly. Wounds of the elbow and wrist are, however, an exception to this rule, and even severe injuries to these joints may be well recovered from. Although there must be exceptions to all rules, it is generally best to use every effort to preserve a limb, regardless of the extent of the injury, if the arterial pulsation can be felt in the extremity, but if this is lost and the hemorrhage is arterial, it is better to amputate at once. Attention was called in this connection to the fact that a limb may be com-

minuted so as to necessitate amputation without any apparent injury to the integument having been sustained. In the management of these injuries the indications are first to arrest the hemorrhage. For this the tourniquet should *never* be applied. Various other methods were recommended. All wet or soiled clothing should be removed. The patient should be covered with warm blankets, the head placed low, and perhaps the foot of the bed elevated, and, if shock is severe, brandy or the aromatic spirit of ammonia administered. Transfusion may be necessary. The wound must be thoroughly cleansed and closed, or dressed open according to the requirements of the case.

The question of primary or secondary amputation, the author believed to be, as a rule, capable of the same decision as in military surgery, viz., the primary is preferred, but cases differ to a great extent in this regard. He was of the opinion that an attempt should be made in every case of comminution to save life by amputation, no matter how small the chance of recovery, unless it would positively lessen the chances. No such rule as that formulated by Erichsen can be relied upon—abandoning to death all adults suffering from a form of injury necessarily fatal without amputation. No rule can be laid down to govern the mode of amputation. It should, however, be early and rapid. All living tissue should be saved. Disarticulation at shoulder or hip is unjustifiable. In support of the value of immediate amputation, the author appended a table of the statistics of the Western Pennsylvania Hospital, from January 1, 1877, to December 31, 1883, including one hundred and twelve amputations for railroad injury.

A large number of cases were reported somewhat in detail, and appendices were added to the paper showing the nature of injuries most common, their treatment, and the results in different parts of the United States.

Before proceeding to the discussion of these two papers, the President called for remarks by Dr. Nancrede, as a close of the discussion of his paper on

SURGICAL INTERFERENCE IN CEREBRAL ABSCESS.

DR. NANCREDE stated that there were but two or three points to which he wished to call attention. One was that, in all the cases he reported, a normal, or even a subnormal, temperature invariably accompanied the formation of a cerebral abscess; and where the abscess was cranial, but not cerebral, or, in other words, was secondary to some other intracranial inflammation, as a circumscribed arachnitis, we have an elevation of temperature; but even in these cases, when the brain substance became involved, the temperature at once fell to the normal degree, or beyond it.

Then, again, he was not aware that the aspirator-needle had heretofore been pushed into the brain substance, where pus was not discovered, by mere section of the dura mater; and although in his case he did not succeed in withdrawing pus by the aspirator, it came up through the opening left after withdrawal of the needle, and relieved the immediately dangerous symptoms. In reference to the case reported by Dr. Campbell, in which respiration ceased immediately after, and apparently in consequence of, the evacuation of a large abscess, he said that there are so many ways of performing artificial respiration that he was reluctant to agree with the former speaker in regard to the cause of death.

In concluding his remarks, the speaker stated that he saw no reason why brain abscess could not be treated just as ordinary subcutaneous abscess with fair result. One such case, he said, had been reported by Dr. Brinton, of Philadelphia. Brain abscesses sometimes exist a long time without proving fatal. An important fact in this connection is that, although the result of operative interference is not as good as could be desired, yet there is no such thing as a recovery without surgical interference.

DR. JOHN H. BRINTON, of Philadelphia, stated that the case referred to by Dr. Nancrede was that of a young man who had his skull fractured by an accident while coasting. The bone was somewhat comminuted. He trephined and removed the fragments. The case did well for a few days; then symptoms of compression arose. He had the impression at the time that abscess was forming. The temperature was normal or slightly subnormal. In order to relieve the symptoms of compression, and, if possible, give vent to the pus, he laid open the dura mater, by a free crucial incision opposite the opening made by the trephine. He did not introduce a probe. This operation he made at two o'clock; at three or four, violent convulsions set in, and continued until eight. At the expiration of that time, a copious discharge of pus occurred from the wound. For some time, it gradually increased in quantity, and became thicker. After a few days, the symptoms subsided, and the boy made a complete recovery.

A discussion of the papers on

RAILROAD INJURIES OF THE HAND

was then called for.

DR. T. F. PREWITT, of St. Louis, agreed with the statement that in amputations of the hand, as much as possible should be saved. There seemed a little incongruity, however, between this statement and that made in regard to the middle and ring fingers. Sometimes it is very difficult to decide what course to pursue.

DR. L. MCLANE TIFFANY said that an amputation at the first phalangeal joint left, as a rule, a useless stump. But this might easily be avoided by simply stitching the divided tendon into the wound of the integument. Union occurred by granulation, and the union of the end of the tendon with the cicatrix gave fair movement of the finger.

DR. B. B. BONTECOU remarked that it made but little difference how much the fingers are mangled; they can be saved provided there is an artery and a vein left to carry on the circulation. He also spoke of the importance of making deep incisions, in order to relieve the embarrassment of the circulation where the return of venous blood was interfered with.

DR. D. MACLEAN, of Detroit, thought the expedient of stitching the tendon into the wound a good one in many cases, but he doubted whether a stump of this kind would be in reality of much more use than otherwise. He had never seen a patient with much motion of a stump, and the usual complaint is that they are painful or otherwise troublesome. He had several times reamputated stumps simply because they were too long. In regard to the ligation of the radial or ulnar artery, he said that such a procedure is almost never necessary, compression answering every purpose.

DR. P. S. CONNER made it a rule, he said, never to make a primary amputation of the hand, no matter what

the extent of the injury may be, and in so doing he believed much could be saved that would be otherwise lost. Where a distal phalanx can be saved by the removal of the bone, it should be saved. In the case of laboring men, more service can sometimes be rendered by amputating regardless of appearance at the metacarpo-phalangeal articulation, but if the patient is a head-worker, a more æsthetic operation is to remove the metacarpal bone also.

DR. NANCREDE spoke very favorably of the use of a solution of the bichloride of mercury as an application to lacerated wounds, especially on account of its antiseptic powers. He reported several cases in which its use had enabled him to save limbs that would have otherwise surely been lost.

DR. H. F. CAMPBELL strongly recommended the ligation of the main arterial trunk as a means of preventing inflammation and swelling.

DR. E. H. GREGORY, of St. Louis, agreed with Dr. Thompson that flexion of the limb was not sufficiently resorted to for the arrest of hemorrhage. He had been in the habit for years of relying largely upon it. To arrest hemorrhage, he said, it is not necessary strongly to flex the limb, but only enough to compress partially the vessel. The pulse at the wrist should not be made to disappear. His method is partially to flex the arm, then to bind it to the chest, as for a fracture of the clavicle, with adhesive strips and a roller bandage.

DR. JOHN H. PACKARD, of Philadelphia, related the case of a man who was twisted around a shaft in such a manner as to produce an injury very closely resembling a railroad injury. The arm was badly mangled and the skin torn from the shoulder so as to render the formation of flaps impossible. Thinking it not right to permit the man to die simply because he could not make an amputation *secundum artem*, he decided to amputate at the shoulder-joint. The flaps were made as if the integument were present. The skin was then drawn as closely as possible and the wound granulated, resulting in a good recovery. He did not believe that enough cicatricial tissue was present to give any great inconvenience, although there would probably be an occasional ulceration for some time to come.

DR. W. W. DAWSON called attention to the value of morphia hypodermatically administered to counteract shock, stating that he always relied upon it and thought it preferable to alcoholic stimulants. He also inquired whether Dr. McCann had made use of elastic compression to keep down inflammation and swelling.

DR. MCCANN stated that he had been accustomed to the hypodermatic use of morphia to relieve pain, but had not used it in large doses or directly with a view to prevent or relieve shock.

DR. JOHN H. BRINTON, of Philadelphia, then read a paper entitled

A REPORT OF TWO CASES OF INTRAUTERINE FRACTURE, WITH REMARKS ON THIS CONDITION, AND REFERENCES TO FIFTY-ONE CASES ALREADY REPORTED.

He stated his belief that the accident referred to was of more common occurrence than is generally understood. The first case reported was that of a strong, healthy, farmer's wife, aged twenty-five, who gave birth at term to a female child, being delivered with forceps. The right leg of the child was deformed. In the fifth month of her pregnancy the mother had fallen, striking on her right side. Two or three weeks later she had a more severe fall. After neither fall was there any hemorrhage, but she complained of great pain on the right side of her abdomen after the second fall. The right leg of the child was shorter than the other at birth. The deformity was greatly relieved by a subcutaneous division of the tibia and adjustment of the fragments.

The second case was that of a woman thirty-five years of age, who, when eight months gone, struck her abdomen forcibly against a tub-handle. She was delivered at full term of a child, with unmistakable evidence of an overlapping fracture of the clavicle.

He held that in all cases in which the deformity is great relief should be attempted by surgical means.

DR. MACLEAN inquired whether injuries to the mother, severe enough to produce intrauterine fracture of the limbs of the fœtus, were ever so severe as to produce abortion.

DR. GREGORY stated that there was in the St. Louis Medical College Museum, the skeleton of a fœtus in which *every* bone has been fractured, partial ossification of the fractures having occurred later.

DR. BRINTON stated that a number of such cases are on record, but that he had omitted them in his report, inasmuch as they were believed to be due simply to imperfect ossification.

DR. N. SENN, of Milwaukee, then read a paper entitled

EXPERIMENTAL RESEARCHES ON CICATRIZATION IN BLOODVESSELS AFTER LIGATURE.

The paper was divided into twenty-four parts or heads, as follows:

1. The history of ligature. 2. Histology of bloodvessels. 3. Intermediate ligature. 4. Immediate or direct ligature. 5. Scarpa's ligature. 6. Double ligature. 7. Momentary ligature. 8. Temporary ligature. 9. Permanent ligature. 10. Aseptic ligature. 11. Thrombosis after ligature. 12. Organization of thrombus. 13. Formation of cicatrix in bloodvessels after ligature. 14. Formation of cicatrix by adhesive or plastic inflammation. 15. Formation of cicatrix from fibrin. 16. Formation of cicatrix from white blood-corpuscles. 17. Formation of cicatrix from red blood-corpuscles. 18. Formation of cicatrix from immigration of corpuscles. 19. Formation of cicatrix from endothelia. 20. Formation of cicatrix from connective tissue. 21. Primary union in bloodvessels after ligature. 22. Experiments. 23. Remarks. 24. Practical suggestions. The experiments upon which the paper was based were made upon sheep, an animal considered by the author preferable to the dog or other animals generally made use of.

Under the head of practical suggestions the following conclusions were drawn:

1. All operations on bloodvessels should be done under antiseptic precautions.

2. Aseptic catgut ligature is the safest and most reliable agent in securing provisional and definitive closure of bloodvessels.

3. A thrombus after ligature is an accidental formation which never undergoes organization, and takes no active part in the obliteration of the vessel.

4. The intravascular or definitive cicatrix is the ex-

clusive product of connective tissue and endothelial proliferation.

5. Permanent obliteration in arteries takes place in from four to seven days; in veins in from three to four days.

6. In ligating vessels in aseptic wounds, the vessel-sheath can be opened freely without compromising the integrity of the vessel tunics, and such procedure renders the operation safer and easier of execution.

7. The double aseptic catgut ligature should be preferred to the single ligature in ligating large arteries in their continuity near a collateral branch, and should always be employed in all operations of tying varicose veins in their continuity, as the safest and most effective measure in producing definitive obliteration.

FRIDAY, MAY 2D—THIRD DAY.

DR. MACLEAN, of Michigan, said that if the conclusions of the preceding paper were correct, many of the views heretofore entertained must be altered. It has generally been considered unsafe and bad practice to ligate the common femoral, even for aneurism, because it was thought impossible to secure the formation of a clot. Now, if Dr. Senn's conclusions are correct, it is not necessary to have a clot formed, but union takes place directly between the walls of the vessel, without reference to the clot.

DR. H. F. CAMPBELL stated his preference for the silk ligature over the animal, saying that he would be afraid to trust the common femoral to a catgut ligature.

DR. H. E. GREGORY, of St. Louis, also expressed his preference for the silk ligature, and he had no doubt that the silk ligature will be absorbed if left long enough. He has seen the loop almost entirely removed by absorption.

DR. W. A. BYRD agreed in the main with Drs. Campbell and Gregory in regard to the security of the silk ligature, but he also used the animal ligature, being careful to get only the best imported article. In amputations, however, he trusted exclusively to torsion, and has not used ligature in an amputation for three years. Listerism had never impressed him deeply.

DR. BILLINGS, U. S. A., remarked that the distinction drawn between animal and silk ligatures was an improper one, inasmuch as silk is an animal product, and was in reality only a better form of animal ligature. It is difficult, however, to get a pure silk thread, because all thread is either dyed or bleached. He thought further that American surgeons ought not to be too severe in their criticisms of Listerism, in the face of the support it receives from surgeons abroad. Nowhere, perhaps, was there so good an opportunity for testing the efficacy of a system of this kind than in the hospitals of St. Petersburg, and there we find that whereas the amputation of even a finger was attended with great danger before its introduction, the very gravest of operations can now be performed with impunity under its use. It is abroad, in those countries which have crowded and filthy hospitals, that its power is best illustrated.

DR. B. A. WATSON said that he had been in the habit of using catgut ligature for the last ten years, and that he trusted it with the same confidence with which Dr. Gregory trusts the silk. He believed that suppuration is, in most cases, the cause of secondary hemorrhage, and not the failure of the ligature.

DR. NANCREDE called attention to the danger of applying too closely the results of experiments on animals to the human subject. For some unaccountable reason the dog was most commonly selected as the subject of experiment, whereas everybody knows that the results of wounds in the dog are vastly different from the results of the same operation on man. The abdomen of a dog if opened will close by first intention and without any great inflammation, while in the human subject the risk of inflammation is very great.

DR. SENN, in closing the discussion, expressed his belief that secondary hemorrhage was nearly always the result of inflammatory changes at the seat of the ligature.

DR. MOSES GUNN, of Chicago, read a paper on

THE PHILOSOPHY OF MANIPULATION IN THE REDUCTION OF HIP AND SHOULDER DISLOCATIONS,

in which he first reviewed the method proposed a third of a century ago by Dr. Reid, of Rochester, New York, and explained the mistake made by those who supposed that Dr. Reid's method was not new. It differed from former methods in being not merely a method of manipulation, but a definite plan of manipulation. Just what the method was, however, does not seem to be well understood. The manipulations are often practised somewhat vaguely, without a clear conception of the nature of the difficulties to be overcome; and it was to the consideration of these difficulties that the author now gave attention. He emphasized the statement of Dr. Reid that, even in operating upon the cadaver, with the muscles all loose, a part of the capsular ligament was torn away in reducing a dislocation of the hip, and stated that he had called attention to the fact that the resistance given by the untorn portion of the ligament was the great factor in the hindrance of a reduction of this dislocation. A number of cases were reported in this connection, and this rule given for the reduction: For the easy reduction of a dislocated hip or shoulder, the limb should be placed in, as nearly as possible, the same position as that which most frequently characterizes it at the instant of escape.

DR. DAWSON, in opening the discussion, said that it had always been a matter of wonder to him whether the capsular ligament was really torn or only stretched. In old cases, like one that Dr. Briggs had told him about a few minutes before, in which the hip was dislocated for eleven months, what was the condition of the ligament at the end of that time? Was it still torn? It seemed to him that much more frequently the capsule yielded and did not tear. He then reported the case of a little boy upon whom he had tried every method conceivable to reduce a dislocation of the hip, but failing, decided upon making a subcutaneous division of the capsular ligament, as suggested by Dr. Frank H. Hamilton. He introduced a rather small knife, cautiously and gently, but scarcely had it touched the ligament when it snapped. This necessitated an enlargement of the opening in order to remove the broken knife-blade. This done, he severed the ligament and reduced the dislocation without difficulty. He was, however, unable to retain the bone in place, and the child died a few days after, apparently from exhaustion.

DR. BRIGGS, of Nashville, reported more fully the case which had been referred to.

Dr. P. S. Conner, of Cincinnati, inquired whether the author of the paper had ever made a post-mortem examination of a hip-joint soon after the occurrence of a fracture? His reason for asking was that his attention had been called a few years ago, when reviewing the subject, to an article by Adams, who showed that it was only necessary to have the head of the bone slip out over any part of the capsular ligament to produce any form of dislocation with which we are acquainted. The bone is therefore most liable to slip out at the weakest point of the capsular ligament, and this point we find in the inferior anterior portion, where the bony rim is almost entirely wanting. He had satisfied himself by experimentation that after allowing the head to slip out at this point, it was possible to produce any of the various forms of dislocation. He could understand very well how a button-hole rent could let the head of the bone out in young children, but he could not comprehend such a condition in the adult.

Dr. Gunn replied that he had never had the opportunity to see a post-mortem examination of a hip-joint soon after a dislocation had occurred, and he did not believe it possible to get the head of the bone out of the hip-joint by passing it over the capsule without tearing the ligament.

Dr. Pancoast stated that he had proved conclusively to his own mind that it is impossible to stretch the capsular ligament. The ligaments about the hip-joint are not only placed so as to hold the bones in position, but they are reinforced in such a way as to prevent the least possibility of stretching. They are composed almost entirely of white fibrous tissue with only a trace of yellow fibres, as if for the purpose of preventing the possibility of any yielding.

Dr. George W. Gay, of Boston, read a paper on

TRACHEOTOMY IN CROUP,

in which he first referred to the difference of opinion that prevails in the minds of leading surgeons with reference to the advisability of the operation in membranous croup. All kinds of treatment have been followed by such bad results that many surgeons considered operative procedure unjustifiable. In the opinion of the author, however, every chance should be given the patient, and he believed that if the operation were more frequently performed the benefit would, in the long run, far outweigh the evil. He then endeavored to show from the records of the Boston City Hospital for the last twenty years, and from other sources, that the results of the operation were not so unsatisfactory as they have been supposed to be, and that many more can be relieved by timely resort to tracheotomy. The term croup he used in its genuine sense as meaning an acute laryngeal obstruction to respiration due to the presence of a false membrane, with two varieties, the membranous and the diphtheritic. Much of the doubt that is entertained in regard to the justifiability of tracheotomy is due to the confusion of these two forms. Prominence was given to the symptoms, glandular enlargement, nasal discharge, and albuminuria, as of value in the diagnosis of the diphtheritic form. He believed not only in an acute, non-contagious membranous form of croup and a similar contagious form, but also in a form often fatal in which no membrane was formed. After reviewing the literature of the subject in regard to the mortality with and without operative interference, the following reasons were given for its use:

1. The disease is always dangerous, and very often fatal.

2. The results obtained from medical treatment alone are extremely unsatisfactory.

3. Tracheotomy gives more relief, and saves more lives, than any other method known to the profession.

4. It seldom hastens death, and still more seldom causes it.

5. Finally, it affords the friends the great and lasting satisfaction of knowing that everything possible has been done for the patient.

Dr. Pancoast inquired in regard to Dr. Gay's method of cutting through the thyroid isthmus, and also whether he had ever excised a piece of the trachea, instead of inserting a tube, stating that he had pursued that method in a number of cases.

Dr. Tiffany spoke in favor of the use of anæsthetics in this operation, believing ether the best agent for the purpose. He had, in one or two cases, resorted to the excision of a piece of the trachea. He considered a definite diagnosis between the forms of croup out of the question.

Dr. Dawson stated that it had been his custom to operate almost entirely without hemorrhage. After incising the skin, he literally scratches his way down through the tissues with a blunt, grooved director, until the trachea is reached.

Dr. L. A. Sayre, of New York, complimented the author upon his recommendation to blow air into the trachea by means of a tube passed beyond the seat of obstruction instead of trying the dangerous expedient of sucking the membrane out. He also narrated a case which he had met many years ago in crossing the plains. A child was dying from croup. By covering the upright posts of the bed with a quilt, and passing steam under it, he was able to give the child a steam bath, and saved its life.

Dr. Fifield, of Boston, believed there was another factor to be considered, inasmuch as the diphtheritic membrane, no matter how severe the symptoms may be during life, is not found entirely to fill the trachea after death. He recollected having seen his father open the external jugular vein in several cases of croup with excellent result. He further remembered having submitted to the same operation at his father's hand, when suffering from that disease in boyhood. The venesection, he said, was followed by a free expectoration of the membrane.

Dr. Tiffany stated that he had once opened a trachea which was completely occluded by the membrane, the child having expired a few minutes before.

Dr. Gay closed the discussion with the statement that he had never excised a portion of the trachea, and did not favor the method. He used to scratch his way to the trachea, but had come to pay less regard to the hemorrhage, as he had never seen it severe.

On account of the absence of Dr. John S. Coleman, of Augusta, the Secretary read the conclusions drawn in his paper on

THE MULTIPLE WEDGE PRINCIPLE IN THE TREATMENT OF ORGANIC STRICTURES OF THE URETHRA.

The conclusions were as follows: 1. In the treatment

of organic strictures of the urethra, urethrotomy, whether internal or external, and also the method by divulsion, are attended by serious risk to the patient on account of hemorrhage, pyæmia, and uræmia. 2. Strictures treated by these methods are no less liable to recurrence than those treated by gradual dilatation; indeed, unless followed by persistent dilatation, they are subject to early relapse. 3. That gradual dilatation, although slower, is almost free from danger, permanent in its result, and on the whole the best method. 4. The multiple wedge principle devised by the author, viz., that of introducing side by side and one at a time successively a number of filiform bougies, whether applied to the interrupted or the continuous method, offers the easiest, safest, and best method for effecting the solution or absorption of the inodular tissue, and for removing the obstruction.

DR. SAYRE stated that the method described in the paper had been in use for a number of years in the hospitals of New York, but that he was not aware until now that it had been introduced by the author of the paper.

DR. PANCOAST stated his preference for urethrotomy, and exhibited a urethrotome which he highly recommended for the ease with which a stricture could be located and incised by its use.

DR. J. EWING MEARS, of Philadelphia, then read

A CONTRIBUTION TO OUR KNOWLEDGE OF THE PATHOLOGY OF TRIFACIAL NEURALGIA, WITH THE REPORT OF A CASE IN WHICH THREE INCHES OF THE INFERIOR DENTAL NERVE WERE EXCISED.

An examination of the literature relative to neuralgia of the fifth nerve, he said, has shown that in those cases in which resort has been had to the employment of surgical procedures as methods of treatment, no investigations, or, if any, very imperfect investigations, have been made to determine the character of the pathological changes which have been present, and upon which the morbid conditions have been founded. He therefore submitted the report of a case in which free neurectomy was performed and in which a careful study was made of the diseased structures removed.

The patient, a German, aged fifty years, had consulted him eight years and a half preceding the time of operation for an intense neuralgic pain involving the left inferior dental nerve. She soon passed out of his care. The methods of treatment prescribed by various physicians failed, and four years later she again consulted him. He now proposed neurectomy to the patient, but she declined and again sought other advice. At the expiration of four years more she again returned, and expressed readiness to submit to an operation. The disease had now assumed the epileptic form, the paroxysms occurring at intervals of a quarter and half a minute. The operation was done, and three inches of a somewhat swollen and reddened inferior dental nerve were removed. The patient was permanently relieved, and the wound healed promptly.

The author then gave the result of experiments showing the area of distribution of the nerve removed, indicated by complete anæsthesia, slight swelling, and a slight increase of surface temperature, and a photograph was exhibited having the anæsthetic area delineated in ink. The portion of nerve removed was hardened, and longitudinal sections of it made. Lithographic prints of these sections were also exhibited, showing the pathological changes consequent upon the disease. These consisted in some increase of connective-tissue sheaths investing the fasciculi as well as of the trabeculi dividing them, and a change in their regular arrangement. Here and there scattered through the connective tissue are minute yellowish-white dots, the significance of which has not been determined, but it is believed to be a fatty degeneration. The chief changes were in the nerve-tubes themselves, the axis-cylinder not being well made out. The medullary sheath was swollen. The changes were most marked near the inferior dental foramen.

With reference to the cause of trifacial neuralgia, and in explanation of its frequency in comparison to similar affections of other nerves, he believed it was best explained by reference to the exposed condition of the nerve. The lesion, he further believed, is, as a rule, peripheral—in its origin at least—although it cannot be questioned that central lesions sometimes do produce the affection. The question of the involvement of Meckel's ganglion the essayist did not consider of great importance, since he believed that the involvement of branches connecting with the four cervical ganglia by continuity of structure more likely to occur than any involvement of the ganglia themselves. In conclusion, the various methods of treatment, nerve-stretching, neurotomy, etc., were considered, the author expressing his belief that neurectomy was not only preferable, but imperative.

DR. CHEEVER stated that he had excised portions of the inferior dental and of the infraorbital nerves, but had not been favored with as good results as Dr. Mears. It was the rule in his cases that the pain returned. He had tried also several other operations. One operation he especially asked attention to was cutting of the condyle of the inferior maxillary bone, dissecting up the nerve to the foramen, then drawing it out and cutting it off. In one case he had wounded the middle meningeal artery just as it entered the foramen, but secured it with little difficulty. He did not attack the Gasserian ganglion, but scraped away all the nervous tissue he was able to find in the field of operation.

DR. PREWITT reported a case in which he removed an inch and a half of the inferior dental nerve, giving only temporary relief. He had not yet attempted another operation. The speaker also reported another case, a woman over fifty years of age, who had suffered a long time from severe neuralgia of the right infraorbital nerve. He removed the portion of the nerve found in the orbit, without cutting away any of the bone. She was only partly relieved. Pain returned and appeared in the nerve of the other side.

DR. MACLEAN reported the case of an old gentlemen who came to be operated upon, asking to have the nerve exsected. The operation was performed, and the relief has proved permanent for six years.

DR. PANCOAST stated that he had had a great deal of experience in cutting out nerves, with generally good success. He referred to an expedient which his father had used, viz.: drawing the nerve out as far as possible, so that when cut the stump would be drawn in beyond the point of compression in the bony canal.

DR. DAWSON reminded the Association of the cases

he reported during the discussion of a similar question last year in Cincinnati.

DR. HUTCHINSON reported a case in which he had tied the common carotid artery for a neuralgia which resisted all other procedures attempted, with the result of giving immunity from the disease for four years.

DR. MEARS, in closing the discussion, stated that his object in writing the paper was chiefly to get points that had been observed by the Fellows in reference to the etiology and pathology of the disease. He did not place much importance upon the operation done in the case reported, because he did not think it would answer in a great many cases. In order that the disease may be treated more scientifically further investigation of its pathology and etiology is needed, and it was to this end that the author had prepared his paper.

DR. WILLIAM A. BYRD, of Quincy, Illinois, then read a paper on

TREPHINING FOR INSANITY CONSEQUENT UPON A DEPRESSED FRACTURE OF THE SKULL.

After referring to the comparative frequency of the operation of trephining for epilepsy, the result of injury, the author spoke of the few cases in which the operation has been performed for the relief of insanity. He had found, in a careful review of the literature by at least fifteen different authors, the operation mentioned by but one—Gross. Prof. Briggs had performed the operation in three cases.

One case had been operated upon by the essayist, in 1883, for insanity gradually developed as a result of an injury received eighteen years before. The skull was found much thickened. A piece an inch and a half in diameter was removed. She made a good recovery from the operation, but her mental faculties improved for three weeks, then became progressively worse.

Thus, of the four reported cases, one died; one improved for a short time, then became progressively worse; and two recovered. This result, the author believes, indicates that the operation should be resorted to oftener, and very much earlier, than it has been heretofore. Dr. Briggs, since his arrival, reports another successful case.

SATURDAY, MAY 3D—FOURTH DAY.

DR. W. T. BRIGGS, of Nashville, read a paper on

THE TREATMENT OF EPILEPSY ARISING FROM INJURIES OF THE HEAD, WITH SPECIAL REFERENCE TO USE OF THE TREPHINE.

Reference was made in the introduction to the brilliant results arising from experiments on animals in the elucidation of the essential nature and pathology of epilepsy. Little was known of the disease until, in 1850, Marshall Hall enunciated his theory of the reflex action of the nervous system, and pointed to the medulla as the centre of this reflex system. Since that time various men have given attention to the subject; notably, Brown-Séquard, Schroeder Van der Kolk, Nothnagel, Myers, Kussmaul, Zenner, and Donders, and of them and their works the author gave a careful review. He next spoke of the time usually intervening between the receipt of injury and the development of epilepsy, and the significance of pain and tenderness over old injuries when associated with epilepsy. The following statements were emphasized: That epilepsy is, in the present state of our knowledge, essentially a functional disease; that two factors are necessary in the production of every case of epilepsy, and must *always* be present, viz., increased susceptibility of the reflex centres and a peripheral irritation; that the author had confined his remarks to those cases arising from injuries of the head which demand operative measures; that such injuries may involve the scalp only, or the cranial vault without fracture, but most frequently with fractures resulting in direct pressure or subsequent pressure, by osteophytes growing from the new bone between the fragments; that in case the point of irritation is situated in the scalp, and the attack is clearly referable to it, the excision of the scar, including the irritable fibrillæ of nerves, should be effected; that if the point of irritation is set up by osteo-sclerosis or hyperostoses of the cranial bones, the trephine should be used and the point of irritation removed; and that, if from depressed fracture of the cranial bones, or osteophytic growths from them, the trephine is demanded.

The statistics collected by Billings and Stephen Smith were given, showing 92 American cases in which trephining had been resorted to, of which 63 were cured, 13 ameliorated, 2 not changed, 14 died. From his own practice 30 cases were given, of which 25 were cured, 3 ameliorated, 1 not changed, 1 died, showing that the mortality is not greater than that of other operations of equal magnitude. He indulged the hope that the mortality may be still further reduced, and asserted that the use of the trephine in such cases is as legitimate as is lithotomy for the removal of stone. The treatment after the operation is important, for the increased irritability invariably established continues for a long time, ready to burst forth into active disease from other peripheral irritation.

As guides to the performance of the operation, the following points were given:

1. The operation should be done as early as possible.
2. It should be thorough and complete.
3. It should be carefully and cautiously done.
4. The wound should be dressed after the open method.
5. Careful after-treatment should be instituted to prevent destructive inflammation.

DR. L. A. SAYRE, in opening the discussion, reported a case to which he had applied the trephine, expecting to find an exostosis but, instead, ound a considerable excavation, the bone being much thinner over a circumscribed area than was normal. Through this excavated area he was also so fortunate as to find the line of the original fracture. The patient thus operated upon was permanently cured, so that he went through the war without any return of it, and is now a policeman in New York. In reference to the pathology of this case, the speaker said that he was at a loss to account for the good result that followed the operation, unless the removal of a button of bone had in some way relieved some embarrassment of the circulation.

DR. CAMPBELL remarked that he believed the bad results reported by many as following trephining for epilepsy were due to the fact that the button removed is too small. Instead of a piece an inch in diameter being taken out, a piece double that size, or larger, should be removed.

Dr. Mears called attention to an expedient to which he had resorted. A boy, aged thirteen years, was brought to St. Mary's Hospital, in Philadelphia, to be operated upon for epilepsy following the history of a fall. Fearing that there was a hysterical element in the case, he had the patient closely watched until the true epileptic character was pretty certainly decided. He raised a V-shaped piece of the scalp, then dissected out the somewhat thickened and inflamed tissues underlying, and closed the wound by suture. Prompt union occurred, and permanent cure resulted.

Dr. Roberts inquired whether the author of either of the papers, or any other Fellow of the Association, had ever used the actual cautery for the relief of these cases of superficial irritation. He had used it once with good result, and recommeded it for the certainty with which it would destroy the abnormal irritability of the parts to which it was applied.

Dr. Byrd endorsed the remarks of Dr. Campbell in regard to the propriety of removing a large button of bone, and stated that if he had the opportunity of repeating the operation on the case of insanity which he reported yesterday, he would remove a piece two and a half instead of one and a half inches in diameter. He also reported a case which had been twice operated upon with the trephine at an interval of two years, with only temporary relief. At the end of another two years he came to him requesting a third operation. A large portion of one parietal bone had already been removed, and he decided to try medicine. He gave him a mixture containing the bromide and iodide of potassium, with the result of preventing a return of the affection while he continued to take the remedy.

Dr. Gouley advised going a step further in the use of the trephine, recommending its use in cases of painful cicatrices as soon as there was any complaint of pain or of compression, without waiting for the epilepsy to be developed. In this way, he thought, many cases of epilepsy would be averted. He had made use of this plan a number of times with no bad effects. On the other hand, he had seen the operation made for epileptic seizures without any benefit. A case of this kind was reported.

Dr. Briggs, in concluding, replied that he had never employed the thermo-cautery in operations of the kind referred to. Neither did he favor it as a method. If the irritation were in the scalp alone, he thought the knife could remove the irritable portion about as well as the hot iron, and if the point of irritation were not in the scalp, the hot iron would certainly fail to reach it.

Dr. Basil Norris, U. S. A., then read a paper entitled

EXTIRPATION OF THE ENTIRE TONGUE,

with a tabular statement of one hundred and twenty-six cases, giving the name of the operator, the date of operation, together with the results in each case, and various other remarks. In respect to authorities quoted, the paper was also exhaustive, referring to all the leading English, French, German, Italian, and American writers. An account of the various methods of performing the operation was given, and points of excellence emphasized wherever met. In regard to the advisability of the removal of the entire tongue, the author considers it not only justifiable, but highly commendable to the operator.

Dr. MacLean said that it had been a long time before he would undertake this operation, but that he had performed it in a few cases, and in a great many more had removed a large part of the organ. He spoke further of the cancerous destruction of the tongue in children. He believed that in most cases these were in reality syphilitic, or a cancerous degeneration following a syphilitic disease of the tongue.

Dr. McGraw expressed the belief that these syphilitic ulcerations are very liable to become cancerous. He also reported a case in which he had witnessed the transformation. A man had consulted him in the early part of summer. As there was a clear syphilitic history, he put him on the iodide of potassium. A few months later, he was compelled to split the tongue and remove a half of it. This, however, failed to check the disease, and it continued to grow in the submaxillary glands.

Dr. Campbell reported a case of hypertrophic glossitis in which he removed a larger part of the tongue with almost no hemorrhage.

Dr. Prewitt reported a case in which he had removed the tongue with the infiltrated glands beneath it, splitting the jaw and accomplishing the removal chiefly with the scissors without much difficulty, but he very nearly lost his patient from suffocation by the thick, ropy mucus that accumulated in his throat. To relieve this he had probangs made, and taught his patient to remove the mucus with them. He also employed a flexible stomach-tube to feed his patient. At the expiration of about a week a secondary hemorrhage occurred from the lingual artery just behind a ligature he had placed on it.

Dr. Tiffany stated that he had noticed the uniformity with which the Fellows who reported cases of extirpation of the tongue spoke of the fear of hemorrhage. He had been accustomed, he said, to make operations about the mouth with the patient lying on his abdomen, his shoulders being supported by two assistants and his head by a towel in the hands of a third assistant who stood behind one of the others. In this position, with the head turned toward a side light, any operation could be made with impunity, so far as hemorrhage was concerned, since the blood was carried forward and out of the mouth.

Dr. C. H. Mastin, of Mobile, then read a paper on

PROSTATIC CALCULI, THEIR PROBABLE CAUSES, WITH NOTES OF REMARKABLE CASES.

Renal and vesical calculi, he said, have, from the earliest history of our profession, offered a fertile field for pathological research, and those minute concretions which form within the follicles of the prostate gland have proved especially interesting, since their true cause has, as yet, not been thoroughly understood. These concretions, almost microscopic at first, gradually increase, yet rarely acquire any considerable dimensions, seldom becoming larger than an ordinary pea. Still, they accumulate in considerable numbers, studding the follicles of the gland, or when increasing in size they break down its parenchyma and collect in distinct cysts. They increase in size, doubtless, from a deposition on their surface, and when not escaping from the follicles cause absorption of tissue by direct pressure, and thus come into contact, forming considerable numbers collected together in one or more distinct pouches. Usually

we find several calculi, each seated in a separate duct; these are generally quiescent and give no evidence of their presence; doubtless they frequently escape along the ducts of the prostate into the urethra and the bladder, and are washed out by the urine. Again, these numerous concretions increasing in size may collect together and light up inflammation, cause constitutional disturbance, terminate in abscess with ulceration, and be discharged either through the rectum or perineum. It is possible that, not being discharged, they may become the nucleus of vesical calculi. This, however, the author considered not probable, since it is rare to find vesical calculi having a phosphatic nucleus encrusted with lithates. The generally accepted opinion of the development of these stones by the formation of concentric layers while yet held in the oval vesicles of the prostate was then reviewed. Notice was taken of the fact that the chemical composition of these calculi varies in the various stages of their development, and is at all times widely different from either renal or vesical calculi. Sassaigue gives as the chemical analysis of these stones in one hundred parts, basic phosphate of lime 84.5, carbonate of lime 0.5, animal matter 15.0 parts. The various ways in which this analysis and other points in the history of the formation of the vesical and prostatic calculi contrasted were pointed out. The author then called attention to several cases, remarkable for the large number of stones removed or for other features connected with them. Dr. T. Herbert Barker, he said, had removed, in 1843, from a laborer twenty-six years of age, twenty-nine calculi, aggregating 1681 grains Troy. The mass of these stones, as they were removed adhering together, measured over four inches in length. A similar specimen, but with no history, is catalogued in the collection of Guy's Hospital. Several other cases were referred to, including some which were reported as prostatic, but which upon closer inspection were undoubtedly of renal or vesical origin, and had simply lodged in the prostatic portion of the urethra—termed by the author secondary prostatic calculi.

A case was next reported in which the author had removed, so far as he had been able to ascertain, the first single stone of truly prostatic origin, and the several steps of the operation given. The calculus was also presented to the Association. It resembled very much in size and shape, the normal adult prostate. Its weight was four hundred and thirty grains Troy. A chemical examination of fragments broken off during extraction, was made by Prof. T. G. Wormley, who pronounced them calcium phosphate. A section of the stone had not been made because the author had desired to present it intact.

DR. GOULEY did not believe the occurrence of prostatic calculi by any means so rare as it is generally considered. Nachet, who has had more experience than any other living writer, speaks of prostatic calculi as occurring in nearly every case of enlarged prostate; what we recognize as adenoid prostate and in the soft prostate. The same author says that while the soft prostate frequently contains calculi, the hard prostate is more apt to contain cysts. The speaker further referred to the large number of prostatic stones usually found. One could not cut into one of these soft prostates without experiencing a sensation as of cutting through sand. They are very gritty, but very small. They frequently do not seem to do any harm. Why this is, he did not venture to say. The prostatic secretion is physiological, and so long as it is undisturbed, no harm ensues. If the description of this distinguished French author was correct, the speaker thought we must consider the disease referred to as another affection, inasmuch as these stones destroyed the prostate. In similar cases which had come under his observation, he had considered the stones found in the prostate simply foreign bodies lodged there. They do not occur, at least in cases in which the prostate is enlarged. He believed that, as Dr. Mastin had said, a distinction should be made between stones formed in the follicles of the prostate and those lodging there. He further recognized the great difficulty of making this distinction, and suggested the probability that the stone presented by the essayist, from the fact of its size and its being single, was truly of vesical or renal origin, having received its external coating while lying in the cavity it had formed in the prostate, and that if a section of the stone were made, it would be found to contain a nucleus composed of urates.

Reference was then made to the difficulty frequently experienced, in cases of this kind, when attempting to feel the stone with the sound, and several cases were reported in which he had been able to get the "click" only after persistent and repeated efforts with the aid of anæsthesia. In one case a man had carried one of these stones for twelve years, knowing that something was wrong.

DR. CAMPBELL reported a patient from whom he had removed at one time two hundred and ten stones, at another time, ten years later, fifty-eight stones, which he believed were of prostatic origin. He stated further that, according to his experience, five-sixths of the stones cut out of the bladder have a uric acid nucleus.

DR. GUNN thought that one of the late speakers attempted to put a straight-jacket on the term "prostatic calculi." He said that since it is customary to call all stones taken from the bladder vesical calculi, he saw no reason for not calling all stones taken from the prostate prostatic calculi. A renal calculus lodging in the bladder and receiving concretions there became a vesical calculus; so, he thought, a vesical or renal calculus lodging in the prostatic urethra, and there forming an excavation, should be considered a prostatic calculus.

DR. MASTIN said that inasmuch as Dr. Gouley admitted that stones from the bladder are coated with deposits of the various urates, the ammonio-magnesic phosphates, or combinations of these, but not with pure phosphate of lime—as the chemical examination of this one showed it to be—he must still insist that was purely of prostatic origin.

TELEGRAM TO DR. GROSS.

The following telegram was ordered sent:

"PROF. S. D. GROSS, Philadelphia.

"The American Surgical Association are unwilling to depart until they are able to learn whether their hope for the improvement of your health has been realized."

The following, recommended by the Nominating Committee, were elected

OFFICERS FOR THE ENSUING YEAR:

President.—WILLIAM T. BRIGGS, M.D., of Nashville, Tenn.

Vice-Presidents.—J. C. HUTCHISON, M.D., of Brooklyn, N. Y.; E. H. GREGORY, M.D., of St. Louis, Mo.

Secretary.—J. R. WEIST, M.D., of Richmond, Ind.

Treasurer.—JOHN H. BRINTON, M.D., of Philadelphia.

Recorder.—J. EWING MEARS, M.D., of Philadelphia.

Council.—HENRY F. CAMPBELL, M.D., 1885; HUNTER MCGUIRE, M.D., 1886; P. S. CONNER, M.D., 1887; J. S. BILLINGS, M.D., 1888.

Drs. E. M. Moore and Lewis A. Sayre were appointed

DELEGATES TO THE INTERNATIONAL MEDICAL CONGRESS AND THE BRITISH MEDICAL ASSOCIATION.

Washington was chosen as the place of the next meeting, to be held the last Tuesday in April, 1885, and to continue four days. Dr. Billings was appointed Chairman of the Committee of Arrangements.

DR. T. F. PREWITT, of St. Louis, then read a paper entitled,

TWO CASES OF MALIGNANT DEGENERATION OF ULCERS OF THE LEG; ONE EPITHELIOMATOUS, THE OTHER SARCOMATOUS; WITH THEIR BEARING UPON THE QUESTION OF THE LOCAL ORIGIN OF MALIGNANT GROWTHS.

The first case was that of a hod-carrier, forty-seven years old, who had suffered for twenty years from an ulceration of the leg resulting from repeated injuries. His general health was excellent. At the end of this time the sore presented an irregular cell proliferation on its surface. The granulations were removed, but not examined microscopically. Nearly two years later, however—in February last—he again returned, with a characteristic epitheliomatous bunch of granulations springing from the old sore, and the neighboring glands enlarged. He refused to have an amputation performed, and the tumor was excised. But as soon as granulation commenced, there was evidence of the epitheliomatous growth. Microscopic examination confirmed the diagnosis. The tumor is still growing, the glands remaining in about the original condition. The second case was a woman, sixty-seven years of age, tall and angular, weighing one hundred and fifty pounds. She had received an injury to the right leg fifteen years ago. Ulceration occurred on the inner side of the leg. Ten years ago a similar ulcer formed on the outer side. Two years ago, when first seen by the author, the surface was covered with scant granulations, the margins calloused, and the tissues around somewhat congested. Varicose veins were present in the upper part of the leg. Last October, the patient noticed a bulging of the lower part of the ulcer. A portion of the growth was excised, and pronounced by Dr. F. A. Glasgow probably a sarcoma. The whole tumor being removed later, it was pronounced by the same gentleman a fibro-sarcoma. The author expressed his belief that, had these two individuals never suffered from the ulcerations noted in the paper, they would have never suffered from the malignant diseases to which they became subject later.

After reviewing the arguments for and against the constitutional origin of malignant growths, the essayist drew the following conclusions:

1. All malignant growths are primarily local in origin.

2. While admitting a constitutional tendency to their development in a limited sense, it is in the same sense and no other that it applies to the development of benign tumors, as chondromas, lipomas, papillomas.

3. Long protracted irritation from any cause may lead to vicious cell-action and development of malignant growths, independent of the existence of any diathesis.

4. The infectiousness of cancer is mainly due to histological characteristics favoring dissemination of germs, rather than to any inherent zymotic quality or spermatic influence, as suggested by Creighton.

5. The recurrence of malignant growths long after removal is due, not to a new outburst, as it were, of the original cancerous dyscrasia, but to the slow development of germs thrown off from the original tumor, and remaining in the system, either at the site of the operation or elsewhere.

6. To argue that heredity, recurrence after operation, or infectiousness, one or all, proves a constitutional origin, proves too much, since all these may be alleged of benign tumors.

7. Early removal of suspicious growths, indeed of all neoplasms, as so earnestly urged by our distinguished ex-President, at our last session, gives the best assurance of complete immunity, or postpones longer the return.

DR. D. MACLEAN briefly reported a case in which a malignant disease of the bladder was due, as he believed, solely to a prostatic irritation by calculi, continuing over several years.

DR. RICHARDSON asked what ground there was for considering the epitheliomatous and sarcomatous conditions in these cases secondary, and why the author did not think that they had existed from the first, since we so frequently see these malignant growths lie a long time dormant.

DR. PREWITT replied that he did not believe a malignant growth would lie so dormant for fifteen or twenty years, as in these cases.

DR. HENRY F. CAMPBELL, of Augusta, then gave an extemporaneous abstract of his paper on

ARTIFICIAL RESPIRATION IN THE SITTING POSTURE.

The speaker described how he discovered his method of artificial respiration. It was one morning, when he was acting as prosector, while drawing his subject from the barrel of alcohol, holding him by the arms, that he was horrified to hear the man, who had been dead six months, take a deep snoring inspiration. He released his grasp, and as the body sank into the barrel, he gave a hoarse expiration! The speaker drew the inference that what would bring breath into a man six months dead would surely do so in the living. He had tried it with the most gratifying results in a number of cases since.

DR. DONALD MACLEAN then gave some clinical notes on

COMPOUND GANGLIA OF THE TENDONS OF THE HAND AND FOOT.

After speaking of the frequency of the affection, especially in the hand, and the views generally held in regard to its pathology, the author related briefly his method of treatment by division of the annular ligament. Just how this caused a cure, he could not state, but he believed that it was by relieving the embarrassment of the circulation, with the removal of pressure, so that the peculiar formation constituting the ganglion was absorbed. In reply to Dr. Gunn, the author stated that

he made no attempt to evacuate the sac of the rice-bodies it contained.

DR. W. S. TREMAINE, U. S. A., reported a successful case of

SUPRAPUBIC LITHOTOMY.

After referring to the infrequency of the suprapubic operation for the removal of a vesical calculus, the essayist reported the following case: J. McH., æt. three and a half years, of good family record, but delicate in appearance and small for his age; had never walked. He had suffered intensely since eighteen months old from retention of urine. The water passed drop by drop, and the pain was great, prolapsus of the rectum occurring at times from the violent efforts at micturition. A number of physicians failed to recognize the difficulty, until Drs. McNiel and Davidson, of the Buffalo Medical and Surgical Dispensary, discovered a calculus. The stone could be felt with the sound at the vesical neck, but the instrument could not be introduced into the bladder any distance. With the finger in the rectum the stone gave the impression of being as large as a hen's egg, and it was immovable. It was evident that extraction through the ordinary perineal section would prove impossible, and therefore the high operation was decided upon. An incision two and a half inches long was made in the median line, down through the linea alba. The peritoneum was carefully pushed back, the bladder opened, and the stone with great difficulty removed. The condition of the bladder was bad. A rubber drainage-tube was introduced, and the upper part of the wound closed. Prompt union occurred. The temperature ranged for several days from 101° to 102°, but the child made an excellent recovery.

A photograph of the calculus was exhibited. The stone weighed nine drachms, was two and five-eighths inches in length, and one and one-quarter inch in its largest diameter, being, in the opinion of the essayist, the largest stone ever extracted from a child of that age, with recovery.

In conclusion, the speaker referred to the accidents of lateral lithotomy as enumerated by Gouley, and showed that the suprapubic operation not only eliminated these, but was on the whole much safer and more easy of execution. The statistics, he believes, misrepresent the operation when they show a mortality against it. "It is safer as regards after-consequences, and is *the* method, the natural, safe, direct route to the interior of the bladder when section is necessary, and the burden of proof is on the advocates of perineal section to show wherein there are any advantages by the circuitous, dangerous, dark route." . . .

DR. GOULEY did not favor the operation. He said that with the present instruments for crushing the stone it would be almost never necessary. It would be performed only by operators at a distance from large cities, when they came in contact with large stones that they were unable to remove through the perineal incision, and were not able to get crushing instruments.

DR. GUNN said that while the suprapubic operation will succeed well in skilled hands, like those of the essayist, it was not a sufficiently safe one to be undertaken by the general surgeon.

DR. JOHN B. ROBERTS uttered the prophecy that within ten years the suprapubic operation would be the one in common use. It was the one that would be chosen by the young men in the profession in preference to one that seemed so fraught with difficulties as does perineal section.

DR. DAWSON agreed with the last speaker as to the probability of this operation growing in favor, though he did not expect its adoption to be so rapid. He further stated that in the western States many of the calculi are so hard as to render crushing, or even the use of the drill, out of the question.

DR. BRIGGS reported a case in which he had removed a stone of enormous size from the bladder of a boy nine years old by this method. But as the boy was in a moribund condition, and he had operated only at the earnest entreaty of the parents, only temporary relief was given, the urine continuing suppressed.

DR. JOHN B. ROBERTS, of Philadelphia, then read, in abstract, a paper on

THE LOCALIZATION OF PERINEPHRIC LESIONS BY MEANS OF CLINICO-ANATOMICAL STUDY,

stated that his paper was suggestive, rather than demonstrative or conclusive, and that he hoped the Fellows of the Association would investigate all cases of perinephric disease, which they met, with a view to definite localization. The lesions liable to involve this region, primarily or secondarily, are inflammation, abscess, cancer of the kidney, cystic degeneration, renal calculi, hydronephrosis, etc. The early recognition of the exact seat of such lesions can only arise from study of anatomical relations and clinical histories. The importance of such localizing knowledge will not be gainsaid in these days of nephrotomy, nephrectomy, and kindred operations. As the study of cerebral localization has now advanced beyond the stage of speculative physiology and has become of practical value to the physician and surgeon, so will the study that leads to localization of perinephric lesions become of future value. The symptoms and signs which must guide us in fixing the exact site are those due to extension of inflammation to adjacent structures, and those caused by increase of bulk at the seat of disease. These may be termed the localizing symptoms as discriminated from the inherent symptoms of the lesion itself. Although there are no dividing lines separating the perinephric area into tracts, it is convenient to speak of upper, middle, and lower anterior, and upper, middle, and lower posterior tracts. The speaker then discussed the varying symptoms likely to be produced by lesions in these different tracts, and from the clinical histories of cases reported by himself and others, and from anatomical study, deduced the following conclusions:

A table of symptoms of probable and possible value in localizing perinephritis and perinephric lesions:

All anterior regions: Pain, tenderness, swelling, œdema, pointing, etc., in front and side of abdomen.

All posterior regions: Pain, tenderness, swelling, œdema, pointing, etc., in loin.

Upper tracts: Pleuritic friction, pleural effusion, empyema, expectoration of pus, dyspnœa, suprarenal involvement, solar plexus involvement. If on right side, bilateral œdema of legs, jaundice, fatty stools, persistent vomiting, rapid emaciation, ascites.

Middle tracts: Albuminuria and casts; suprapubic, scrotal, or vulvar pain or anæsthesia; suppression of

urine; uræmia; pus in the urine; œdema of scrotum or varicocele (especially on left side).

Lower tracts: Flexion of hip; pain or anæsthesia of front, inside, or outside of thigh; retraction of testicle; pain at knee; scrotal or vulvar pain or anæsthesia, without accompanying albuminuria; unilateral œdema of legs; abscess or sinus near Poupart's ligament; constipation (if left side); involvement of chyle receptacle (if right side).

The discussion of the paper was postponed from lack of time.

UNSETTLED QUESTIONS IN RELATION TO INJURIES OF THE HEAD

was the subject of a short paper by DR. DAVID PRINCE, of Jacksonville, Illinois. The question chiefly discussed was the propriety of making exploratory incisions in cases of injury of the head in which it is doubtful whether or not the bone is depressed or even broken. In the opinion of the essayist, such incision was not only justifiable, but the duty of the surgeon. In cases of depression, in which the injury can be at once recognized through the opening in the scalp received at the time of injury, it is advised by high authority to elevate the depressed bone at once. When the danger from a simple incision of the scalp is so slight as it is now, with our improved antiseptic measures, should the suspicion of a depressed bone go unverified? Is it not better to investigate, and, if an injury is found, relieve it at once? The chief argument, at least for the innocence of the operation, lies in the power of antiseptics to prevent the occurrence of putrefactive changes in the wound. The speaker expressed his preference for carbolic acid over the newer and, as he believed, less efficient antiseptic agents. He further insisted strongly upon the superiority of the wet dressing as compared with the dry, and expressed in strong terms his distrust of dry dressings of any kind when applied to the scalp. It is impossible, he said, to secure a germ-proof contact between a dry dressing and a surface on which hair is growing as rapidly as it does on the scalp, and pushing up the materials employed. But he believed that if putrefactive changes have once developed in the recesses on either side of the dura mater, they cannot be overtaken by any kind of antiseptics not destructive to the tissues of the patient. To prevent this putrefaction, the author applies the carbolic acid solution every twenty minutes.

The following papers were read by title, and ordered published in the volume of *Transactions*: *Anæsthesia and Plaster-of-Paris Bandage in the Treatment of Sciatic Neuralgia*, by Dr. John A. Comingor, of Indianapolis, and *Practical Views of Neoplasms*, by Dr. E. H. Gregory, of St. Louis.

A paper by Dr. Fenger, on *Cerebral Abscess*, read by title, was ordered published in the *Transactions*.

A COMMITTEE ON NECROLOGY

was appointed, consisting of Drs. J. Ewing Mears, P. S. Conner, and J. S. Billings.

The committee to investigate the

END-RESULTS OF EXCISIONS DURING THE WAR,

are Drs. Conner, Ashhurst, and Norris.

PRESIDENT MOORE expressed briefly his deep appreciation of the meeting just closing, in which he said he had taken the part more of a spectator than of a participator. The papers have been good, he said, the work has been good, and we should all be satisfied with it as a whole.

He called attention to the fact that in the present meeting the Constitution had been entirely laid aside, inasmuch as thirty papers had been read instead of only six, or two each day as therein provided for. He earnestly recommended that in the future this clause of the Constitution be carefully complied with, since it would lead to the presentation of more carefully prepared papers and a more scientific discussion of them. "We should stand upon a higher and higher plane," he said, "until this Association shall rest upon a more lofty basis than it has ever stood upon before."

A vote of thanks was tendered to the President. The President-elect, Dr. Briggs, was then conducted to the chair, and after he had expressed his gratitude to the Association for the distinction conferred upon him, the session was adjourned.

OBITUARY.

SAMUEL D. GROSS, M.D.

ALTHOUGH in a measure prepared for the sad tidings, the medical profession will learn with deep sorrow that Dr. Samuel D. Gross expired on Tuesday afternoon, May 6th, at his residence in this city, after an illness of four weeks. There had been evidences of failing strength during the preceding three months, which finally culminated in derangement of his digestive powers, and in death from exhaustion. The autopsy, which was made by Professor Da Costa, Dr. J. Ewing Mears, and Dr. Orville Horwitz, disclosed marked gastric catarrh, with irregular thickening of the mucous membrane, fatty heart, and a large cyst of the right kidney. The brain weighed forty-eight ounces; its convolutions were numerous and its sulci deep.

The death of this truly great, noble, pure, and unselfish man closes a life of usefulness that was without a rival in the medical profession of this country, a profession that he honored as much as he loved. His loss will be deeply felt both at home and abroad by a large circle of professional and personal friends, and especially by the younger men, to whom he was always glad to render assistance and advice.

Dr. Gross was born near Easton, Northampton County, Pa., on July 8, 1805, and was, therefore, in the seventy-ninth year of his age. He received his early literary and classical education at the Academy at Wilkesbarre, and subsequently at the High School in Lawrenceville, N. J.; studied medicine under the preceptorship of Dr. J. K. Swift, of Easton, and afterwards became an office pupil of the late Professor George McClellan, graduating from the Jefferson Medical College in 1828. Immediately upon receiving the degree of Doctor of Medicine, he settled in Philadelphia, and employed his leisure hours, which are common to the life of every young physician, in close study and in translating from the French and German languages *Boyle and Hollard's General Anatomy*, *Hatin's Manual of Obstetrics*, *Hildebrand on Typhus Fever*, and *Tavernier's Operative Surgery*. But the master-mind which was destined to guide medical thought wherever the science is recognized, was not content to perform the almost mechanical work of translating, and in 1830, two

years after his graduation, he brought out his *Treatise on the Anatomy, Physiology, and Diseases and Injuries of the Bones and Joints*, in which, for the first time, attention was called to the use of adhesive plaster as a means of extension in the treatment of fractures of the lower extremity. In the same year he returned to Easton, where he remained until 1833, when he was made Demonstrator of Anatomy in the Medical College of Ohio. After holding this position for two years, he accepted the Chair of Pathological Anatomy in the Cincinnati Medical College, then newly organized, and delivered the first systematic course of lectures on Morbid Anatomy ever given in the United States. In 1832, before going to the West, Dr. Gross performed a series of experiments on hanging and manual strangulation, the results of which were published in the *Western Journal of Medicine*, and afterward incorporated by Dr. T. Romeyne Beck in his great work on *Medical Jurisprudence*. He also made numerous observations on the temperature of the blood and on the coagulation of that fluid as influenced by various circumstances.

During his residence in Cincinnati, his occupancy of the Chair of Pathological Anatomy enabled him to devote much of his attention to this subject, and in 1839, he brought out his *Elements of Pathological Anatomy*, which passed through two subsequent editions in 1845 and 1857. This was the first systematic treatise on this subject in the English language. After teaching in Cincinnati for four years, he was called to the Chair of Surgery in the University of Louisville, where he remained until 1850, when he was elected to the same Chair in the University of New York. While in Cincinnati and Louisville his pen was not idle. His *Experimental and Critical Inquiry into the Nature and Treatment of Wounds of the Intestines*, appeared in 1843, *Treatise on the Urinary Organs*, in 1851, a third edition being demanded, in 1876, and a *Treatise on Foreign Bodies in the Air-passages*, in 1854.

After remaining in New York for one year he returned to the University of Louisville, at the earnest solicitations of his former colleagues in that school. But a greater place was being prepared for him. In 1856 he was elected to the Chair of Surgery in the Jefferson Medical College, from which the distinguished Mütter had just resigned. This position, offered by his Alma Mater, was accepted, and the remainder of his long and useful life was spent in Philadelphia.

One year, in 1857, after coming to the Jefferson College, the great literary work of his life, his *System of Surgery*, appeared, the sixth edition of which was issued in 1882. His reputation as a teacher and surgeon was already established, and if anything were necessary to increase his national and foreign reputation, his *System of Surgery* at once and completely established it. Being at present the text-book in fully one-half of the medical colleges in America, and the acknowledged standard for surgeons throughout the country, it is scarcely necessary to more than mention it to the American profession. But the appreciation of this encyclopædic work is not confined to this country, as in 1863 it was translated into the Dutch, and, if we do not mistake, into the Russian language.

He was one of the five authors of *A Century of American Medicine*, published in 1876, the chapter on surgery being from his pen. He was one of the founders and editor-in chief of the *North American Medico-Chirurgical Review*, the publication of which was stopped by the War of the Rebellion, after an existence of five years. He was President of the American Medical Association in 1868, and of the Centennial International Medical Congress in 1876; was founder and first President of the Pathological Society of Philadelphia, of the Philadelphia Academy of Surgery, and of the American Surgical Association. He was a Professor of Surgery for forty-two years, during which period he dwelt with great emphasis on the guiding principles of that branch of medicine, and was the first to suggest or perform the operation of wiring the dislocated clavicle to the sternum or acromion process, the suturing of divided nerves and tendons, amputation high up in senile gangrene, a modification of Pirogoff's amputation, an operation for neuralgia of the jaw in old persons, deep stitches in wounds of the abdomen, and a direct operation for hernia by suturing the pillars of the ring. He was also the first to describe prostatorrhœa, and was the inventor of numerous instruments.

No American physician ever had so many or so great honors from celebrated institutions of learning as Dr. Gross. In 1872, Oxford conferred upon him the degree of D.C.L.; in 1861, the Jefferson College, of Cannonsburgh, the degree of LL.D.; Cambridge her LL.D., in 1880, and the University of Edinburgh and the University of Pennsylvania conferred the same degree in April and May, 1884. He was a Member or Fellow of a large number of medical societies and organizations both American and foreign, including the American Philosophical Society, the Imperial Medical Society of Vienna, the British Medical Association, the Royal Medico-Chirurgical Society of London, the Clinical Society of London, and the Pathological Society of London.

In addition to the works already mentioned, Dr. Gross was well known as a voluminous, clear, and entertaining writer for the medical press. His addresses, introductory and valedictory and his biographical memoirs of various medical men are numerous, including, among the last, those of Ambrose Paré, Ephraim McDowell, Daniel Drake, John Syng Dorsey, J. Cobb, Charles Short, Valentine Mott, and Robley Dunglison. While in Louisville he prepared an exhaustive report on Kentucky surgery, which was published in the *Transactions* of the Medical Society of that State, and in which he first established the fact that Dr. Ephraim McDowell was justly entitled to the honor of being the father of ovariotomy.

In 1882, after having taught surgery for forty-two years, he relinquished his laborious duties as an active teacher, and to the regret of his colleagues, the trustees of the institution, and the whole profession, he resigned his Chair in the Jefferson Medical College. As a teacher, a lecturer, and an operator, Dr. Gross was greatly respected and admired by his classes. He was an untiring student, systematic and economical of his time, and while punctually fulfilling his engagements as professor and practitioner, he was enabled to keep himself thoroughly informed in medical and general literature. His extensive knowledge of disease, added to a ready facility in diagnosis, enabled him to grasp at a glance the salient features of a case. He was never satisfied unless his work was thoroughly

done, and felt that in every case he had a triple duty to perform: first, and above all, to his patient; secondly, to his pupils; and, lastly, to himself. No surgeon was ever more alive to the responsibilities of his office, or more determined to perform them with an eye single to the best interests of all concerned. He was always a warm advocate of a higher grade of education, and a more thorough course of instruction for the student of medicine. Whether as surgeon, author, or lecturer, the stamp of his individuality has been indelibly impressed upon the history of science in America. He was never content simply to keep pace with the stride of scientific research, but has often been the pioneer to open up unexplored regions. With him, science and humanity have gone hand in hand, and, as a result, the technical and general literature of the century has been enriched by his works, and humanity made happier by the greatness of his heart.

Among his last contributions to his profession may be mentioned his paper on *The Value of Early Operations in Morbid Growths*, read before the American Surgical Association, in 1883; *Remarks on the Importance of Trained Nurses*, which appeared in The Medical News of September 15, 1883; a paper on *Wounds of the Intestines*, read before the American Surgical Association by his former pupil, Prof. Richardson, of New Orleans, April 30th; and one on *Lacerations of the Female Sexual Organs*, read, on May 8th, by Dr. Busey, before the American Medical Association. These last papers bear the stamp of that patient and untiring "research in the past, which lend to the learning of the present its highest value." Truly it may be said of him that he died in harness; and though the threescore years and ten had almost gone on to fourscore, his mind still retained the vigor with which it had worked for over half a century.

NEWS ITEMS.

EDINBURGH.

(*From our Travelling Correspondent.*)

The Tercentenary Festival of the University of Edinburgh, which closed last night with a general illumination of the city, has been admirably managed throughout, and has made this place temporarily the centre of interest for the scientific and literary world. As remarked by Sir Alexander Grant, we could almost say now of the University of Edinburgh what was said of Portia:

> "Nor is the wide world ignorant of her worth,
> For the four winds blow in from every coast,
> Renowned suitors."

But while in the crowd of distinguished guests, delegates from other universities and from learned societies, and recipients of the honorary degrees conferred, all faculties were represented, and divinity, law, literature, science, poetry, and art each received due honor, it is no disparagement to all these to say that medicine was preëminent over all of them in the number and character of its representatives; and it is fitting and proper that this should be the case. During the last half of the last century, the medical school of the University of Edinburgh was the leading medical school of the world, and drew students from all civilized countries. To a considerable extent, this is still the case, and, with its fifteen hundred medical students, it is, if not the largest, as claimed by Prof. Fraser, certainly one of the three largest medical schools in existence.

At the luncheon given by the Medical Faculty in its new buildings, the scene, and the names of the speakers, reminded one vividly of the London International Congress of 1881, and the same may be said of the impressive graduation ceremony and of the banquet.

The new buildings of the Medical Department of the University attracted much attention on the part of visitors, and are well worthy of careful examination by all who are interested in medical education, since they may be taken as embodying in concrete form the latest views of experts in this matter. They are built of the gray stone of which all important buildings in the city are constructed, and are arranged around a large quadrangle, the entrance to which is through a fine arch which is a prominent feature of the principal front.

In these buildings the nine departments of anatomy, surgery, practice of physic, physiology, pathology, midwifery, chemistry, materia medica, and medical jurisprudence, are accommodated, each having its own amphitheatre or lecture-room, and its own laboratory or practical rooms. Special facilities are provided in each department for experimental work and original investigations by the professor and his assistants, the laboratories are well fitted up, and the whole structure is thoroughly fireproof. The new infirmary close by gives the means of clinical instruction, and when the size of the classes is considered—including about 1500 medical students—it is difficult to suggest improvement in the plans for their accomodation. It should be remembered in this connection, however, that a large number of these students receive a very considerable part of their instruction not in the University, but in the extra-mural school, which is an extremely important appendage to it.

The greatest and most imposing gathering of the Tercentenary was that for the reception of delegates and the conferring of honorary degrees, which took place in the great Synod Hall on Thursday, April 17th. Probably there has never before been gathered under one roof such a truly cosmopolitan assemblage of acknowledged leaders in philosophy, literature, science, and art. Every European State, except Spain, Turkey, and Greece, was represented, and delegates from both North and South America, from India, Japan, Australia, and the Cape of Good Hope were also present. The delegates from European universities and learned societies presented a quaint and attractive sight in their robes and caps, many of which were of colors and fashions adopted centuries ago. Among these were especially conspicuous the flowing green robe and high black velvet collar, worn by Professor Pettenkofer, the bright crimson of Professor Ollier, of Lyons, and the gorgeous yellow silk robe of Professor Mézières, of Paris. After the presentation of the delegates to the Chancellor, the latter proceeded to confer the honorary degrees awarded by the University, including sixteen D.D.'s and one hundred and twenty-two LL.D.'s. Among the recipients of the latter were the following medical men, viz.: George W. Balfour, President of the Royal College of Physicians, Edinburgh; Fordyce Barker, of New York; John S. Billings,

U. S. Army; Sir William Bowman; John S. Bristowe; Sir Andrew Clark; Surgeon-General Thomas Crawford; Professor John E. Erichsen; Professor S. D. Gross; Sir William Gull; Professor H. von Helmholtz; Dr. J. Henle; Dr. Joseph Hyrtl; Dr. Haldane; Sir William Jenner; Thomas Keith; John Marshall, President of the Royal College of Surgeons, London; Dr. H. Maudsley; Dr. H. Gueneau de Mussy; Professor Ollier; Sir James Paget; Professor von Pettenkofer; Dr. Priestly; Sir J. W. Reid, Director-General Medical Department, Royal Navy; Professor Saxtorph, of Copenhagen; Professor Schmiedeberg, of Strassburg; Dr. E. H. Sieveking; Dr. John Smith; Professor B. J. Stokvis, of Amsterdam; Professor Virchow; Dr. P. H. Watson, and Dr. Samuel Wilks.

Among the non-medical men who received the honorary degree of Doctor of Laws, the most conspicuous were: Lieutenant-General Alison, Prof. Cayley, Sir Samuel Ferguson, Mr. Flower, Prof. Franckland, Mr. Froude, Mr. A. Geikie, Prof. Haeckel, Prof. Jowett, Prof. de Laveleye, Sir Frederic Leighton, Baron de Lesseps, Hon. James Russell Lowell, Sir John Lubbock, Sir Henry J. S. Maine, Prof. Mézières, Prof. Pasteur, Count Saffi, Prof. Seely, Prof. Sidgwick, Sir James Stephen, Robert Browning, and Alfred Tennyson.

But if the sight of all these distinguished men was interesting and impressive, scarcely less so was the view which they had on the last day of the festival of some two thousand students gathered in the body of the same great hall, and welcoming with voices, sticks, and waving of hats their favorites among the guests, or the glimpse of the same students obtained by those who saw their torchlight procession, and to many of whom, no doubt, it gave rise to the thought put into words by Mr. Lowell—that it was a coming from the darkness to go into the darkness, yet keeping up the flame.

The great peculiarity of the Edinburgh University is that it was founded and has been maintained by the people, and not by church or king. It has, in Mr. Lowell's words, "gone near to the life of the nation," and it has been a part of the life of the city; it has been "our tounis collidge." And the crowning fame of the University has been, and now is, its medical school, with which the names of Monro, Cullen, Gregory, Bell, Alison, Syme, Christison, Simpson, Lister, Turner, and a long list of others well known in medical literature are indissolubly connected.

American physicians will heartily join in the sentiments expressed by Sir James Paget in proposing a toast to "Prosperity to the Medical School of the University of Edinburgh." He referred to the fact that its career has illustrated the value of rivalry, and that in the work of life an honest and earnest rival is often better than a cautious friend, and wished for it more pupils, more wealth, more museums filled with the treasures of science, a more abundant power of spreading knowledge, and more power in turning knowledge to the utility of men in the remedy of disease. This is the Alma Mater of American medical schools, which have in the main adopted its organization of chairs and methods of management, and which should bid it God-speed in the work which yet remains before it.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.—At a meeting of the College of Physicians, held on Wednesday evening, May 7, Dr. J. M. DaCosta was elected President, vice Dr. Samuel Lewis, resigned.

UNIVERSITY OF PENNSYLVANIA.—At the annual commencement of the University, held on May 1st, the degree of M.D. was conferred on one hundred and one candidates; and Dr. T. G. Wormley delivered the Valedictory Address. On behalf of the Graduating Class, a full-length portrait of Prof. Alfred Stillé was presented to the University.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending April 26, 1884, indicate that remittent fever has considerably increased, that diarrhœa, dysentery, measles, and whooping-cough have increased, and that pneumonia, scarlet fever, cerebro-spinal meningitis, and inflammation of the kidney have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending April 26, and since, at four places, scarlet fever at twelve places, and measles at eight places.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 29 TO MAY 5, 1884.

HEGER, ANTHONY, *Major and Surgeon.*—From Department of Texas to Department of the East.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

HAPPORSETT, J. C. G., *Major and Surgeon.*—From Department of Texas to Department of the East.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

BENTLEY, EDWIN, *Major and Surgeon.*—From Department of the East to Department of Texas.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

MIDDLETON, PASSMORE, *Captain and Assistant Surgeon.*—From Department of Texas to Department of Missouri.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

KOERPER, E. A., *Captain and Assistant Surgeon.*—From Department of the East to Department of Dakota.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

DICKSON, J. M., *Captain and Assistant Surgeon.*—From Department of the East to Department of California.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

GIRARD, A. C., *Captain and Assistant Surgeon.*—From Department of Dakota to Department of Missouri.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

GIRARD, J. B., *Captain and Assistant Surgeon.*—From Department of Arizona to Department of the East.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

HALL, J. D., *Captain and Assistant Surgeon.*—From Department of Dakota to Department of the Columbia.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

HALL, WM. R., *Captain and Assistant Surgeon.*—From Department of Missouri to Department of Texas.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

CUNINGHAM, T. A., *Captain and Assistant Surgeon.*—From Department of the East to Department of Missouri.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

MCCREERY, GEORGE, *First Lieutenant and Assistant Surgeon.*—From Department of Arizona to Department of Dakota.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

COCHRAN, J. J., *First Lieutenant and Assistant Surgeon.*—From Department of Missouri to Department of Arizona.—*Par. 2, S. O. 101, A. G. O.*, May 1, 1884.

SCHUFELDT, ROBERT W., *Captain and Assistant Surgeon.*—Relieved from temporary duty in Surgeon General's Office, and ordered to report to Lieutenant-Colonel Basil Norris, Surgeon, U. S. A., Attending Surgeon, Washington, D. C., for temporary duty in his office.—*Par. 6, S. O. 100, A. G. O.*, April 30, 1884.

PHILLIPS, JOHN L., *First Lieutenant and Assistant Surgeon* (Fort Warren, Mass.).—Ordered to report for temporary duty to the Commanding Officer at Fort Preble, Me.—*Par. 1, S. O. 51, Headquarters of Department of the East*, April 25, 1884.

DIED.

JOHN M. CUYLER, *Colonel and Surgeon* (retired).—Died at Morristown, N. J., April 26, 1884.

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GENTLEMEN: The subject-matter of the remarks to be presented this morning was suggested to me by an article published in the *British Medical Journal*, in 1882, from the pen of "that good man among men, and great man among doctors"—J. Marion Sims. The article in question was an appeal for operative interference in penetrating gunshot wounds of the abdomen, in lieu of the "expectant treatment" so universally accepted and adopted by the profession, and which, in a few seemingly well-authenticated instances, has led to recovery. The appeal was uttered in behalf of the vast majority on the side of fatality attending these cases, and was based upon the deductions to be drawn from the recoveries, following operations for diseases affecting the viscera of the abdomen and pelvis, during which the most terrible injuries have been inflicted upon the contents of these cavities—the peritoneum exposed for hours, as well as brought in contact with all kinds of foreign and usually irritating substances.

It is scarcely necessary for me to affirm in your presence the fact that, with few exceptions, the older writers and surgeons advocate the "expectant treatment" in the management of these injuries, while the younger writers and surgeons favor operations, pinning their faith upon the wonderfully favorable results attending the practice of Listerism, the purest of antiseptic surgical methods.

During the past few months I have instituted and carried out, with the valuable assistance of Mr. J. McDill, and Drs. Anthony, Freer, and Bolles, a series of experiments for the purpose of ascertaining the results to be obtained by immediate operations after these wounds; with the hope that the relation of the attending circumstances and events would be interesting as well as useful, by adding to the data now in our possession other data from which may be determined more intelligently the course of action to be adopted when these cases come under our charge for treatment.

No attempt will be made to review the great question of penetrating gunshot wounds of the abdomen, which would lead me beyond the scope of the paper. Nothing but a fair recital of the history of the experiments, with some application of the conclusions to be drawn therefrom, will be undertaken. With this intent in view, there will be presented to you the accompanying phenomena, the manner of treatment, and results of thirty-seven intentional gunshot wounds of the abdomen, confining my attention entirely to my own observations and exhibiting to you such specimens as I have been able to preserve, taken from the animals, both of those which died and of those which were sacrificed, after recovery, to obtain the specimen. Experiments of like nature have been made upon animals by very many surgeons previous to the application of their convictions of the necessity of certain procedures to relieve disease or the effects of injury in the human body. No preparation of the animals selected for experiment was made, either as to choice of physical condition or surrounding circumstances, except that they were anæsthetized previous to being hurt. The wounds were produced by the ordinary Smith and Wesson revolver of 22, 32, 38, and 44 calibre, and by the 22 calibre rifle. The shots were given at short range, so the damage done by the bullet fairly represents the injury met with, either in military or civil practice, as the results of shots from the firearms now in use. At first, no attempt was made to give a definite direction to the course of the bullet other than that it should perforate the abdominal cavity. The results soon confirmed the fact so well known, that the larger number of patients suffering from such wounds never come into the hands of the surgeon, their injuries proving rapidly fatal.

This ending, we can readily understand, must be a common one when we bear in mind the construction and nature of the viscera contained in the cavity, especially their great vascularity, having vessels of immense size supplying them with and carrying away from them the blood necessary for their nutrition and the performance of their special functions; not to mention the main systemic artery and vein coursing through the cavity in a position rendering them readily liable to perforation, death following speedily.

It was also soon ascertained that a severe perforating and lacerated bullet wound of the viscera, such as of the kidneys, of the spleen, and of the pancreas, could not apparently be treated successfully in any other way than by an absolute removal of the injured organ, and notwithstanding the reported successful removal of almost every important organ of the abdomen by one surgeon or another, the conclusion was reached that some of these organs must be left in situ, in order that the functions of life may be carried on. Hence we were compelled to exert such control over the course of the missile as to have it produce a wound of the nature of those likely to come, and actually coming, under the care of the surgeon. So that the injuries became those confined to perforations and injury of the intestinal tube, with occasionally the injury of some of the larger special organs. It will not be amiss to recall to your minds, very briefly, some of the triumphs of abdominal surgery, and more especially to impress the fact that shot wounds of the cavity and contents present many questions of prime importance which are not met with in, and do not complicate, ordinary operations for disease or injury with any free external wound. The removal of the spleen for acute wounds nearly always results in recovery; so also one kidney has been removed successfully, either for disease or injury, often

enough to place the operation of nephrectomy among the list of justifiable undertakings. Again, wounds of the intestinal tube of all degrees of severity, up to complete division by the resection of portions of the entire calibre thereof, have been successfully treated by surgeons, as is proved by the experimental researches of Dr. Traverse, the eminent Prof. S. D. Gross, Dr. Bell, and others, and confirmed by the experience of many surgeons during operations upon the human being for diseases of these cavities. Still, in each of the examples mentioned, the circumstances were entirely different from what is found present in perforating gunshot wounds of the abdomen. In the former, the peritoneal cavity was clear of blood and other extraneous substances; the prevention of their entrance entirely under the control of the operator. In the latter, blood in large amounts was always found present, and the peritoneum was smeared with the contents of the intestinal tube, necessitating prolonged efforts to secure a cavity clear of all hurtful substances. Of necessity, the latter cases would be least likely to escape the probabilities and dangers of subsequent inflammation of the serous membrane.

Primary resection of portions of the intestinal tube, or entire removal of separate organs, are operations comparatively easy of performance, and are not necessarily attended with any damage to or exposure of any other portions of the abdominal cavity, outside of the immediate proximity of the site of the operation. Extravasation and hemorrhage should be entirely prevented and controlled; and the peritoneal sac can be maintained perfectly clean during the time of, and after, all the procedures required by the operation. After gunshot wounds, besides the resection or removal of any special organ required, there is great shock, and prolonged manipulation is necessary to obtain a proper cleanliness.

The recital in detail of each experiment would be tiresome and occupy too much time, so that your attention will be called only to the more important facts and circumstances determined by them. There will be published with the paper a somewhat extended account of each experiment, from which individual inferences may be drawn.

First comes the question of hemorrhage and damage to bloodvessels, as this is primarily the most common and certain cause of death, and demands the surgeon's first attention. In its excessive amount, occurring rapidly and suddenly, is to be found the explanation of the cases which are immediately fatal. This result will surely happen when the largest arterial trunks are severed by the bullet; further, its copiousness and persistency of flow, even when none but very small bloodvessels are divided, involve a matter of serious concern, if not a fatal issue, either from the amount of blood lost, or in predisposing to septic processes from blood decomposition. There is a remarkable persistency in the flow of blood following the severance of vessels in the abdominal cavity, perhaps dependent upon the laxity of the tissues through which these vessels course, the absence of pressure from surrounding soft parts, and the lack of the peculiar influence of the atmosphere, either from its weight or clot-producing power.

When the abdomen is opened immediately after the transit of a bullet, its cavity is found to contain a large amount of blood, the quantity, of course, being in proportion to the size of the vessels wounded, but always a disproportionately large amount, no matter what their calibre; further, the flow is still going on from vessels of all size. There seems to be slight disposition to the formation of an obstructive clot in the mouths of the smaller ones, and slow retraction or contraction of the walls of the larger. Bleeding stops only when the heart ceases to beat in a faint from excessive loss, or when the amount of blood is so large that by its bulk, and weight, and distention of the abdominal walls, it makes pressure sufficient to occlude the open vessels.

The conditions are very quickly altered after air is admitted through the abdominal section. Clots rapidly seal up the smallest vessel; the smaller arteries spurt less forcibly and soon cease beating; the larger ones contract and retract, just as occurs in the wounds of soft parts in other regions of the body. This is in accordance with and corroborative of the experience in hemorrhages occurring in abdominal surgery in the human being. Few of us have failed to see cases like this: A patient dies suddenly, with all the symptoms of acute prostrating hemorrhage. Post-mortem examination shows the abdominal cavity filled with blood. The blood is carefully cleared away in the search for the source whence it came; and when this is found, it is a matter of astonishment that such a vast amount of blood could come from so small a vessel. Perhaps it is a small vein of the ovarian venous plexus, or a minute vessel in the thin-walled sac of an extrauterine fœtation, or the partially closed vessels in the shrunken stump of a recently removed ovarian or other tumor, or some recently divided adhesions—all of them vessels which, in any other part of the body, would be no item of concern to the surgeon, or need any of his special care to prevent bleeding from them.

The lesson taught by these facts is of imperative importance in all operations upon these cavities; and, even if mastered, loses nothing by reiteration. Excessive hemorrhage being certainly the principal cause of speedy death in severe gunshot wounds in this region of the body, where evidences of its presence are plainly exhibited there can be no hope whatever of saving the lives of any of the wounded except by immediate abdominal section. This alone, by admitting air quickly, staunches the fast flowing current, and gives time for the application of the ordinary rules of surgery for the prevention of hemorrhage. In order to be safe from subsequent trouble, every divided bloodvessel must receive the surgeon's attention, occluding clots must be thoroughly sponged away, and in their stead must be placed the ligature or the sear of the actual cautery. If left without this restraint and the abdominal opening be closed, the same conditions are restored as existed previous to the section; and, as reaction comes on, bleeding will surely recur, and in large amount—leading to death from this cause alone, or furnishing a frequent source of septicæmia. This fact, again, is corroborative of the experience of ovariotomists, the most successful being those who take the greatest pains to staunch all bleeding before closing the abdomen.

Following a resection of three or four inches of bowel and a ligation of two large mesenteric arteries wounded by the bullet, there occurred a mortification of several inches of the entire intestine above the site of resection.

The mortified part corresponded with the distribution of the arteries wounded and ligated. This, assuredly, was an important fact to know, if at all likely to occur as the result of wounds of these arterial branches; even its accidental occurrence is a circumstance to be remembered. Its occurrence would surely add largely to the gravity of the cases in which it happened, probably necessitating a resection of a portion of the intestine corresponding to the area of distribution of the wounded vessel. The great freedom of anastomosis between the mesenteric arteries rather argues against their wounds being followed by any such hazardous result; still, the case recorded above required explanation. Two experiments were performed in order to determine whether destruction of the arteries alone was sufficient to lead to such mortification. Both demonstrated that a closure of two or three of the largest subdivisions of the main mesenteric vessel was not in itself sufficient to produce death of the portion of intestine supplied by them.

The complication of a complete resection of the bowel, with a ligation of two or more vessels, is the only explanation to be given of the case in which mortification occurred. The experiments prove that such result does not follow simple closure of the vessels by ligation.

The second item to be considered refers to the course of the bullet, and the character of the damage done by it. Nothing can possibly be more uncertain and erratic than the track of the missile through the body. A contracting muscular fibre, an edge of fascia, the elasticity of the skin, a surface of bone, or a distended knuckle of intestine, each and all of these at times present obstruction sufficient to divert it from the direct line of its flight. It is certainly astonishing what very extensive and severe lacerations of the intestine are produced by so small a bullet as one of calbre No. 22 (Fig. 1), the

Fig. 1.

entire circumference of the bowel at some points being mangled beyond recognition. Again, it is equally surprising how minute are the perforations made by the large No. 44. As a rule, the larger the calibre of the bullet the larger the wound.

An estimate of the direction of transit, based upon the points of entrance and exit, is purely conjectural, and furnishes no standard whatever by which we may judge of any supposed injury to any organs known to lie in such course. In one experiment the bullet made four openings through the abdominal walls, and did no damage other than contusion of two knuckles of the small intestine, and gouging the serous membrane. The animal had a remarkably deep furrow along the course of the "linea alba." The bullet entered the right side of the abdomen obliquely, two inches from the midline, perforated its walls, and, coursing to the left, furrowed the peritoneum in its passage, and was evidently deflected outwards immediately before reaching the linea alba, by a knuckle of intestine which it contused slightly. Here it made its first exit through the walls, passed to the left side of the midline, again perforated the abdominal walls, and, furrowing the peritoneum upon the left side, finally made its second exit through the abdominal walls three inches to the left of the linea alba. Near its place of final exit a second knuckle of intestine was found badly contused. The contusion was so severe and extensive that it was thought best to resect a length of one inch. The animal recovered.

In a second instance the bullet entered the cavity about two inches to the right of the linea alba, on a line with the umbilicus, with a direction upwards and to the left side. It made its exit nine inches to the left of the midline, and just at the lower edge of the last rib. On opening the abdomen the stomach was found greatly distended, entirely concealing the other viscera from view, and presented two large perforations in its walls about two inches apart, from which some blood, mucus, and food were found running into the peritoneal sac. The wound to the right, in the stomach walls, was the smaller and situated directly opposite the entrance perforation in the abdominal wall, having the same direction. The wound to the left in the stomach walls (two inches to the left) was the larger, very ragged, and had evidently been made by the bullet deflected forward at its first entrance into the stomach. After leaving the stomach the bullet impinged upon the inside of the abdominal walls just to the left of the midline, and then, instead of perforating them at that point, was again deflected upwards and to the left, merely furrowing the peritoneum along the remainder of its course to the point of exit mentioned. The wounds of the stomach were inverted, as it were, into the cavity of that organ, by bringing its peritoneal surfaces surrounding the wounds in contact with each other by means of the continued catgut suture. The abdomen was carefully cleansed of blood, etc., and the wounds in the walls closed in the ordinary way. The animal speedily recovered from the injury without any uncomfortable symptoms. During recovery from the effects of the ether, the animal vomited considerable quantities of blood, giving an additional evidence of the perforation of the stomach.

There were two cases in which the bullets perforated the abdominal walls, and in their transit did no injuries to the viscera, and in which the points of entrance were five and six inches apart. In each instance the only damage done was a furrowing and laceration of the peritoneum along their entire courses, the blood from the track of injury falling into the abdominal cavity. In one experiment the bullet failed to penetrate the abdominal walls, and was subsequently dissected from between the muscles. On opening the cavity quite a rent was found in the spleen, opposite to the seat of

the external bullet wound, from which blood was freely flowing. There was neither abrasion nor perforation of the peritoneum. This case may suggest the probable cause of death in some cases from non-perforating wounds. The laceration was evidently caused by concussion alone.

Other instances might be cited to illustrate the exceedingly great uncertainty as to the course taken by the bullet, and as to the organs probably impaired. They would also confirm the possibility of perforations of the walls without accompanying injury to the contents of the abdomen. Still, no instance was shown of failure to produce a wound thereof when the bullet's course lay among the intestines. Their safety followed deviation by glancing.

The wounds of the intestine may be many in number and situated very near to each other (Fig. 2), so that

Fig. 2.

one resection, including all the openings, will constitute the only operation that furnishes relief.

Again, the openings may be few in number and widely removed from each other; and if each wound is large, and the damage to the tube extensive, such as is usually produced by a 32, 38, or 44 calibre bullet, three or four resections are necessary. The latter are the most difficult cases to manage and most fatal in their results. The position of the point of entrance and exit of the bullet in the intestine is subject to immense variety even in simple cases. It may involve only the top of a knuckle of intestine, merely opening the cavity thereof. The points may be so near each other that only a half inch or less of intestinal wall separates them from each other. The bullet may merely cut off the mesenteric junction opening into the cavity more or less freely. The intestine is often perforated transversely near the middle, or longitudinally; in the latter case, the bullet entering at one point, courses along in the cavity of the tube for some inches and then makes its exit.

All of these varieties depend upon the situation of the intestinal folds, with reference to each other, at the time of the transit of the bullet. One case showed ten complete perforations in eighteen inches of length of the ileum.

Extravasation of the contents of the tube was present in every instance in which there existed the slightest degree of perforation. The contents were forced out into the peritoneal cavity or on to the surface of the intestines, if the wound was large, by the bullet itself and the normal tonic contractions of the bowels, and, if small, perhaps by the latter alone. This facility of extravasation agrees with my experience in wounds of the intestine in the human being. I have personal knowledge of two instances in which the medium sized aspirator needle was employed to relieve tympanitic distention of the tube with success, so far as getting rid of the gas was concerned, and giving great temporary comfort to the patient. Death ensued from the disease. Post-mortem examination in each case demonstrated the presence of fecal extravasation at the seat of the needle puncture. It would not be an arduous task to collate instances of this accident, in the practice of others, where this plan has been adopted. It is difficult to understand how any other result could follow a perforation, if there be contents at the seat of the puncture, when we remember how strong and constant is the action of the circular muscular fibre. It is stated that the protrusion or eversion of the mucous coat, which ensues very rapidly after complete division of the walls, acts as an immediate stopper to wounds of small size, say one-eighth of an inch in diameter. This may be true in incised wounds, but it was not shown to exist in a single one of the several hundred perforations coming under my inspection as made by the bullet. The latter tears away and lacerates the parts through which it passes, and perhaps paralyzes the muscular fibre in its immediate neighborhood, but, whatever the cause, there was no instance in which the eversion of the mucous membrane was sufficient to prevent extravasation. Recognizing the very deleterious influence of this material upon the peritoneal membrane, this fact of the great certainty of extravasation adds another point to the argument in favor of abdominal section in these cases, as furnishing the only means by which this source of trouble can be absolutely eliminated. As part of the extravasated material from the wounds of the intestine, it was an exceedingly common thing to find intestinal worms of all kinds and in large numbers, protruding from the rents or free in the serous cavity.

In the treatment adopted during these experimentations, it was found necessary to make an extensive external incision, freely exposing the abdominal cavity, in order that all the viscera might be thoroughly and carefully examined, and every wound brought within reach. In a majority of instances the median line gave space enough. In two, the bleeding vessels could not be reached without a lateral prolongation towards the flanks.

There was no reason to suppose that the extent of the incision added very much, if at all, to the gravity of the operation. After opening the abdomen, the intestines were all turned out, critically examined for perforation or contusion, the situation of these fixed, and the hemorrhage therefrom controlled by means of the snap forceps; after which, wounds of special organs were sought for. If the substance of the spleen or the kidney was found perforated, the organ was immediately removed after ligating its bloodvessels, the stump being

returned to the abdomen. If slight lacerations only at some point on the surface had been produced, these were closed by bringing peritoneal surfaces of the organ over the wound by means of the continued suture.

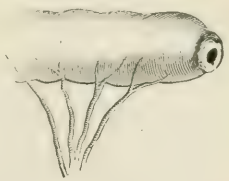
The peritoneal sac was then carefully and thoroughly cleared of blood and other extraneous substances by repeated sponging or irrigation. The intestines, which during this process had been protected by being enveloped in towels wrung out of warm water, were now cleanly sponged, while all unwounded portions were returned to the abdomen.

It seems to be of little consequence whether or not the intestines be returned to the cavity in any definite order—in fact, it is doubtful whether they are ever returned precisely to the same positions they originally occupied before being disarranged during the operation. Still, some care must be used in order to avoid the accident which happened in one experiment. After the divided ends of the intestine had been united, it was found that during the manipulation one of the ends had in some way been passed through an opening in the divided mesentery, so as to produce a figure-of-eight convolution in the tube. It was left in this shape. The animal recovered, and I have the specimen with me to demonstrate the perfectness and security of the union in the intestine at the place of reunion. The animal was sacrified, to secure the specimen, six weeks after the operation. The abdominal cavity was quite free from evidences of inflammation, except where those misplaced folds lay in contact with each other; at this point, slight peritoneal adhesion had formed between them.

Where several wounds occurred rather close together, severe enough to destroy a considerable portion of the integrity of the bowel, one resection was made to include all of them, even when the length of intestine removed measured ten inches or more. Where the points of injury were widely separated from each other, and extensive damage done at each point, several resections, of a length of the tube, just sufficient to include the injured portions, were made. In the former case, in which several inches or more of the tube were taken away, the mesentery was ligated as close as practicable to the intestine (Fig. 3), in sections corresponding to the number of bloodvessels going through it to the resected portions. The mesentery was then divided close to the intestinal wall. After this, the tube itself was separated and the wounded portion removed. One artery always needing ligation was found in the divided ends, at the point of junction of the mesentery with the intestine. Or a triangular section of mesentery removed with the point of the triangle away from the bowel. Before the final division of the intestine, its contents were pushed back out of the way, and compression exercised upon its walls by a pair of forceps or a temporary ligature, in order to prevent extravasation of its contents through the divided ends. The mark of constriction made by the forceps or ligature used to close the lumen of the bowel was to be plainly seen several days after the operation. The safest compression can be made by an assistant's fingers. Results soon demonstrated the paramount necessity of carefully selecting the place for final division of the intestine, in order to avoid sloughing of the edges approximating together, the results being best in those cases in which the division was made close to the point at which any given mesenteric artery approached nearest to the intestine, as compared with those in which the cut was made in the intervals between any two branches of these vessels, and this was seemingly dependent on the better supply of blood belonging to the former cases. Immediately after division of the intestine, there followed an instantaneous, regular, and considerable contraction of the calibre of the tube (Fig. 4) close up to the divided edge, caused by the action of the circular muscular fibre. The diameter was often diminished more than half by this contraction (Figs. 1, 2, and 3). This persisted for a time, but was soon followed by an eversion of the mucous membrane, which rolled out and over the constricted portion in a remarkable manner (Fig. 3).

Fig. 3.

Fig. 4.



This protrusion of the mucous membrane forms a serious obstacle to easy and close approximation of the ends of the bowel in the efforts to bring them together by sutures; and, when turned into the bowel during such procedure, diminishes its calibre considerably, although it was not demonstrated that the obstruction was ever sufficient to prevent the passage of the intestinal contents. Several efforts were made to get rid of it, and

overcome the seeming delay caused by its presence, but all these were finally abandoned. It was pared away with the scissors; it was dissected up from the other coats for a quarter of an inch from the edges, but the conclusion was finally reach that, instead of being a harm, its presence was useful in giving support, protection, and perhaps vascularity to the freshly sutured edges; at least, in all instances in which it was removed, the stitches were found torn out and union defeated. In no case in which it was left entire, did there fail to be union in some part, and no sutures gave way when properly applied.

In all instances in which a single perforation was severe enough to require a resection of the wounded part, it was found advantageous to leave, if possible, a strip of the bowel near the mesenteric junction (Fig. 5), taking out the

FIG. 5.

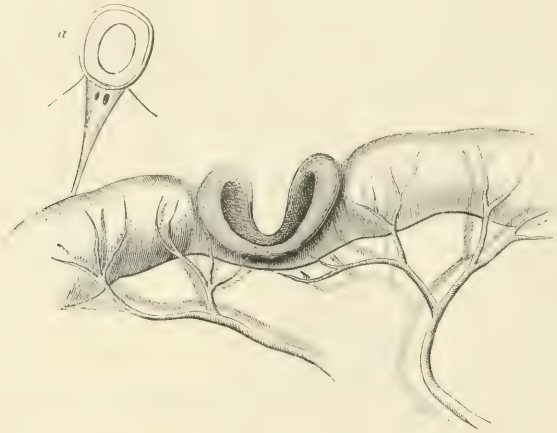
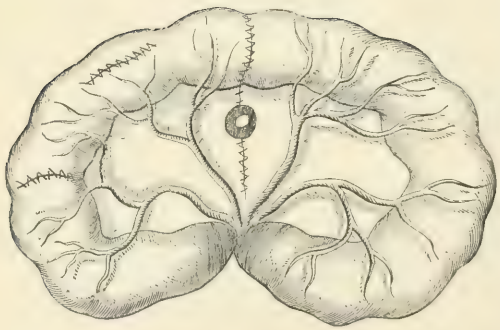


FIG. 6.



wounded portion by means of a V-shaped incision. The part left acted as a support to the wound; avoided division of the bloodvessels at this point; opposed the action of the longitudinal fibres, and in no instance in which this plan was adopted was there any appearance of separation of the wound or any displacement of stitches. In perforations through the stomach, the wound did well after drawing the peritoneal surfaces some distance from the edges thereof, over it (Fig. 6), by means of the continued suture, thus converting it into a linear wound. The same plan was adopted with success in abrasion and small perforations in the small intestines.

This way of treating the bullet openings in the bowel, is susceptible of much wider application than would appear possible at the first glance. I am quite well satisfied that it will safely take the place of excision, in not a few cases of quite severe injury. The torn edges of the wound can be turned in and peritoneal surfaces fastened together, even in large wounds, with perfect confidence in the result of safe and secure adhesion following. It seems probable that by far the greater number of successful cases will follow a single resection, even if that include a number of perforations, and involves eight or ten inches of bowel, in comparison with those cases in which several excisions are made of wounded portions widely separated.

Perforations passing through the mesenteric surface of the intestine were found the most difficult to treat, and even if slight seemed always to require a complete excision. A partial excision of this surface of the bowel resulted in an acute-angled elbow which never did well. The point of attachment of the mesentery with the bowel will usually be found the most troublesome to manage in applying the sutures in restoring a complete division. (Fig. 5, *a*.) It is quite difficult so to place the sutures as to secure a perfect reinversion of the mucous membrane, to bring serous surfaces fairly in contact with each other, and to get a sound junction.

The difficulty arises apparently from the manner in which the folds of peritoneum separate from each other

before passing on to invest the bowel, leaving a little triangular interval filled with loose connective tissue, fat, and bloodvessels. Now, if the suture fails to include the muscular coats of the intestine as well as the peritoneum at this point, the junction will surely give way and extravasation result. To make this point secure the greatest possible care must be taken in placing at least three sutures, this number being usually quite enough to include the troublesome area, and these should always be the first sutures applied. In placing the remaining sutures to complete the junction, after placing the three sutures mentioned at the mesenteric surface, it assists materially in the ease of application, saves time, and especially avoids trouble from the everted mucous membrane, to apply one at the most convex surface, and then one, half way down, on each lateral surface. After this is done the remainder can be introduced easily and rapidly. If introduced in a regular series, one after the other, all the way round, it is a very slow process, the mucous membrane is always in the way, the needle-openings in the intestines are apt to be uneven, and it is altogether the poorest plan of proceeding. The advantages mentioned as gained by taking the course suggested, are certainly all of them items of importance and have some bearing on the result; at best, these procedures will be found very prolonged and tedious. The material used by us for sutures was silk and catgut, the latter for the continued, the former for the interrupted, ligatures—No. 1 catgut, No. 2 silk. The needles were the full-curved, round needles and the ordinary sewing needle; the latter is the best. The sutures were introduced fully the third of an inch from the divided edges, made to include the peritoneal and muscular coats, and brought out just free of the edge on one side, and were then reintroduced close to the edge, and made to include about the same amount and kind of tissue on the other side, being very sure not to allow the needle to pass into the intestinal cavity. Howse, of London, proved conclusively, in his cases of gastrostomy, that the fact of entrance of the needle into the cavity of the tube, carrying the thread with it, made the difference between success and failure; cases dying from peritonitis and extravasation when the entry occurred, and recovery following when the thread included only the peritoneum and muscular coats.

Again, the everted tissue should be turned in before introducing the needle, so that it will pass through the rim of constriction; if entered too far away from the divided edge, too much tissue is turned into the intestine. When the mucous membrane was turned in and the suture tightened, two broad surfaces of peritoneum were brought in contact. This you will recognize as Lembert's suture (Fig. 6), with one change—Lembert directs that only one and a half line in width of tissue should be taken up by the suture. This amount of tissue will do very well in the closure of small slits, for which it was intended and to which it was applied, but complete resection needs a much firmer hold to withstand the strain of peristaltic movements. The fact is that it makes no difference whatever what kind of suture is used so that the principle of positively securing the application of two broad surfaces of peritoneum in contact with each other is certainly carried out. Jobert's, Gely's, and Czerny's double row of sutures were all given a fair trial; but none of them resulted as well as this. It never failed to be followed by good union when properly applied, with peritoneal surfaces brought together around the entire circumference of the intestine.

The greatest number of mishaps followed drawing the sutures too tightly, which, if done, leads to death of the applied edges and of course to failure. They must be drawn only sufficiently close to bring the surfaces fairly in contact, the subsequent swelling from obstructed circulation will hold the surfaces firmly together until glued to each other by the rapidly forming adhesive material. The interval left by the incurving of the edges of the bowel immediately after the completion of the operation, was found entirely obliterated, and the sutures covered up by effused lymph at the end of twenty-four hours. In one or two instances in which very small openings had been made in the bowel, they were occluded by passing a suture around the perforation, a short distance from its margin, pushing the wound into the cavity of the intestine, and then by tightening the suture the peritoneum was drawn together over it—a very satisfactory plan of procedure where circumstances will permit its application.

The question of the proper disposition to be made of the divided mesentery, after removal of some length of the intestine, is an important one to decide. No plan adopted proved entirely satisfactory. Previous to separation it was ligated in sections, or inclosed by a V-shaped cut (see Fig. 2); the part beyond the ligature is apt to mortify and thus prove a focus for fatal inflammation. The tissue of the mesenteric membrane is not very vascular, and the vitality of the distal portion of the stump is seemingly best provided for by causing it to adhere to surrounding vascular parts. In some cases the stumps were left free in the abdominal cavity; these all did badly, each showing mortification. In others the different sections were all included in one suture and then stitched to the bowel at the seat of operation, making as nearly as possible a continuous surface of mesentery.

These did much better, there being few instances of sloughing. When sloughing occurred it seemed to be dependent upon and to follow a too tightly fastened ligature. This method, above mentioned, of treating the divided mesentery is useful in another way; it gives support to the bowel at the point of resection; maintains the intestine in proper position by preventing bending, and also leaves fewer raw surfaces free in the serous sac. This last, a condition acknowledged to be the frequent source of serious trouble from faulty adhesion to surrounding organs, and from furnishing points from which septic absorption takes place.

A plan of dividing and treating the intestine and mesentery has been suggested to me as a possible improvement on those already noticed. It is really an application of the plan referred to above in single perforations. This is to make the separation through the intestinal walls three-eighths of an inch on either side of the mesenteric attachment, tear away the mucous lining of the retained strip of bowel, and draw the peritoneal surfaces thereof together by the continued stitch. This would avoid division of the bloodvessels going to the bowel, do away with the necessity of using ligatures, and leave no raw surfaces free in the abdominal cavity. The opening formed by its folding together where the

bowel ends are united should be closed by the continued suture.

Bleeding from slight lacerations of the spleen, kidney, or liver, can be controlled with actual cautery, lightly applied, perhaps the very best method to adopt. If the wound is a complete perforation of the body of the organ, the hemorrhage is very great, rendering extirpation of the entire organ apparently the only sure way of surmounting the difficulty.

Quite frequently the entire mass of the greater omentum seemed to require removal. The bullet in transit not only perforated it, here and there, but passed along between its folds as well, leaving injured tissue and blood-clots of considerable size in its track. These clots disseminated themselves in the meshes in such a way as entirely to prevent their removal without tearing the tissue to shreds. When this condition was present in any degree, the mass was amputated, after ligation, in sections. In a few instances, these stumps gave rise to trouble, either from recurring hemorrhage or mortification of distal end.

The circumstances under which these experiments were made, were such that it was absolutely impossible to carry ou full antiseptic appliances. The external incision was treated with iodoform and oakum or absorbent cotton, and with two exceptions healed by first intention. The bullet wounds through the abdominal walls were not probed nor disturbed in any way. Occasionally, when large and much contused, iodoform was poured on them. In only two instances did they suppurate or give rise to any trouble whatever, crusting over and healing rapidly. This result clearly enforces the rule of not disturbing the track of a bullet through the soft parts, unless the most urgent reasons call for interference. The damage of a serious nature is not in the abdominal walls but in the cavity; the nature of it can be better ascertained and the most satisfactory treatment adopted, after section through the linea alba, rather than by enlargement of the wounds of exit or entrance, if any surgical interference be instituted.

In gunshot wounds of any part of the body it is not the injured muscular tissue or fascia that causes grave concern, but the torn arterial trunk, or severed nerve, or fractured bone made by the missile, and here, too, incisions out of the course of the bullet-track often furnish the best exposure of the parts for manipulation.

None of the wounds of entrance were perpendicular to the surface of the abdomen. All were more or less obliquely directed through the component tissues of the walls, so that they were valve-like in character, and tended to close spontaneously. None of the cases presented any extravasation of the contents of the intestines through the external wounds, notwithstanding the lacerations of the tube were often very extensive, and considerable quantities of fecal matter were found in the peritoneal sac. The conclusion naturally follows that the discharge of such matters through the external openings is not of frequent occurrence after the wounds under consideration. The absence thereof is far from being proof of the non-occurrence of perforation of the intestine.

It can scarcely be expected that extravasation through the wounds in the abdomen will often happen as an immediate occurrence. This is most likely to occur, if present at all, several days after the injury, following adhesion of the bowel to surrounding parts, and the accumulation of considerable quantities of matter. There is no reason to suppose that interference with the adhesions to be met with in operations done some time after the injury, would be followed by any worse consequences than that which follows their disruption during the performance of operations for ovarian or other tumors. The hazard supposed to attend their severance is certainly exaggerated. With a clean cavity they will do equally well in all cases.

These experiments have not developed any data which will aid in the positive diagnosis of the severity or extent or kind of injury done to the viscera, or render such diagnosis less difficult than heretofore, previous to abdominal section. They go a step in advance of this by supporting the assertion that it is absolutely useless to expect immunity from penetrating injury of the intestine when the bullet has traversed the cavity. It seems —and is—infinitely more reasonable to subject the patient to the slight risk of an abdominal section, showing unwounded intestines, than to allow him to pass through the fearfully deadly peril of wounded intestines unrelieved, on the barren supposition that they may have escaped injury.

Some uncertainty is likely to arise, except in those cases showing extravasation of the contents of the bowel, or those in which the free loss of blood, as indicated by the usual symptoms accompanying such accidents, calls for aid. When doubt exists, and a critical condition of the patient argues severity of lesion, abdominal section surely seems to promise relief that can come in no other way. Exploratory incision of the abdominal walls has been done so often, and with so little hazard, as to entitle it to be classed as a procedure in itself almost destitute of danger. Such a conclusion is certainly supported by the results developed during these trials. The rule was, no trouble whatsoever from this incision.

No deduction can more justly or positively follow, as the result of these experiments, than that an incision *de novo*, through the linea alba, is the best method of procedure in the treatment of the class of wounds under consideration; a plan far preferable to enlarging either of the openings made by the bullet. It at once gives command over the entire cavity, therefore any lesion likely to result in harm is far less liable to be overlooked. It is the least vascular part of the walls; incisions thereof are more easily and perfectly coaptated than elsewhere, heal readily and soundly, and, as a consequence, the oncoming cicatrix is less likely to be followed by ventral herniæ.

39 animals were used in these experiments, exclusive of those dying from the effects of the anæsthetic. 2 of the 39 were used to demonstrate the effects of closure of the main branches of the mesenteric artery upon the nutrition of the intestines. Of the remaining 37, 3 cases died immediately after the shot, or from the effects of profuse hemorrhage, one having a division of the aorta just below the mesenteric artery; the second had a large laceration of the kidney, with a wound of the renal artery; the third, a laceration of both kidney and spleen. One case, No. 4, had tetanus three weeks after operation, and is given a special position, simply owing to the presence of this condition as a complication in the case. The post-mortem examination, as already mentioned, developed other conditions which would

have caused death, and which were, no doubt, the cause of the tetanic convulsions. 12 of the remaining cases died inside of twenty-four hours, either from severe primary or recurring hemorrharge, and the effects of the very extensive character of the wounds. 2 out of this 12 were cases requiring removal of the pregnant uterus, accompanied with many perforations of the bowel. Death in both occurred from secondary hemorrhage from uterine stumps, the ligature having slipped. 3 more had slight lacerations of the spleen and numerous perforations of the intestine. The spleen was removed and several inches of the tube excised in each case. In 3 others, from twelve to twenty inches of the bowel were excised, and many arterial trunks severed. 1 of the 12 had rapid mortification of five or six inches of the entire calibre of the bowel, apparently dependent upon the division of two large mesenteric arteries by the bullet, and also the resection of six inches of the intestine. The remaining 3 of the number dying inside of twenty-four hours are classified as having died of shock. In all of them the damage done by the missile was of excessive severity. The bullet was of large size (38 or 44 calibre), and the firearms possessing great penetrating and lacerating power. There was not manifested in any case any recognizable evidence of shock aside from that following great loss of blood. The transit of the bullet made no noticeable impression upon the pulse or respiration. In every instance in which signs of severe prostration became manifest, through change in respiration or weakening of pulse, there was found profuse hemorrhage to account for such condition. I am inclined to infer that the cases are exceptional, indeed, in which purely nervous shock will give rise to symptoms severe enough to mislead one to perform an unnecessary ventral section; rather, when severe constitutional manifestations follow the passage of a bullet through the abdominal cavity, good cause for them will be found, as soon as the cavity is opened, in wounded viscera or bloodvessels, and this course will often be the only possible way of either actually saving life or even prolonging it. None of these 12 cases could possibly have lived longer than twenty-four hours after the injury received. Most of them would have died much sooner without the control of hemorrhage alone made possible by the opening.

Two cases of the series were subjected to the expectant treatment. These cases were chosen because their injuries did not seem very severe; the hemorrhage was not great and the prostration not extreme. Both died: the first in one day; the other lived five days. Post-mortem examination showed extensive extravasation of the contents of the bowel and septic peritonitis. In one case an attempt was made to establish an artificial anus. The wounded intestine was resected and the ends fastened to the edges of the abdominal incision. The animal died of septic peritonitis in three days. This trial was made early in the experimentation, before any definite plan of procedure had been settled upon. This is the only experiment that has given rise to any regret, for I feel satisfied that with a fair junction of the bowel and a clean abdomen, the animal would have been saved. 18 of the 37 have thus far been accounted for; of the remaining 19, 10 died, and 9 recovered.

The 10 fatal cases lived from three days to three weeks. Peritonitis, from one cause or another, seemed to be the precursor of death. In 6 of them, mortification of the ligated stumps of the divided mesentery, together with mortification of the edges of the recently united bowel, was present. In the one that lived three weeks, death was the result of intestinal obstruction caused by the adhesion of a fold of the intestine to the stump of mesentery left free in the cavity. An acute flexure was produced at the point, against which the contents of the bowel had accumulated in large quantity. A rupture was found above this mass, through which extravasation had taken place. The inflammation was so intense that everything was matted together, and the specimen so horribly offensive it could not be preserved. There was no separation at the point of operation on the bowel; it was thicker here than elsewhere, but full distention with water was allowed without leaking. All of these cases demonstrate conclusively the necessity of great care in the manner of dealing with the divided mesentery, and in the application of the sutures which bring the separated bowel ends together. The remaining four furnished evidence of separation of the recently united parts of the intestine at the mesenteric junction. In all of them the thread failed to include the muscular and fibrous coat of the bowel, holding only the peritoneum; the result was extravasation, and death followed.

It may be a matter of surprise to you that the percentage of successful cases presented is so small—9 out of 19—so few out of so many. To me, knowing well the extremely adverse circumstances under which these experiments were performed, it is a matter of astonishment to have so many recoveries included in so few cases. It is suggestive to remember that all the recoveries followed the use of the modified Lembert's method of bringing the peritoneal surfaces together, while in many of the failures trials were made of other methods. Full six weeks have gone since the last case, followed by recovery, was subjected to operation. The first favorable case was treated four months ago. None of the animals present any evidence of being other than in their usual good health. The longest resection of intestine among the recoveries, measured over six inches, and included four perforations.

It is scarcely possible to do work of any kind under more disadvantageous surroundings than accompanied the performance of these experiments. The operative work was carried on, and the animals kept, in the prosector's room of a medical college during the winter session, in the midst of the odds and ends and bad hygienic conditions of such a place. No better accommodations could be secured, The labor has been purely one of experimental inquiry and not a striving after recoveries implying a choice selection of attending circumstances and special preparations to that end. Therefore I judge it proper and fair to claim the results as satisfactory. These results certainly indicate that a better showing is likely to follow where more satisfactory control can be had, over both patients and surroundings, than was present during these examinations. They clearly demonstrate that a hopeful expectation of recovery may be entertained after operation, and suggest the nature of the injuries produced, what accidents to avoid, and what treatment to adopt.

My confidence in coming before you with no better record is assured, when I remember that all of you are well aware of the great mortality of these injuries, under

all circumstances. It must be large surely, when Dr. Otis, in the *Surgical History of the War*, says that the authenticated cases of recovery can be counted on the fingers of one hand. It cannot be said that operative interference in these cases has as yet an established position. Still, perhaps, Dr. J. Marion Sims looked with prophetic eyes upon the future, when he closed the article already referred to with the following words:

"I have the deepest conviction that there is no more danger of a man's dying of a gunshot or other wound of the peritoneal cavity, properly treated, than there is of a woman's dying of an ovariotomy, properly performed. Ovarian tumors were invariably fatal, till McDowell demonstrated the manner of cure, which has now reached such perfection that we cure from ninety to ninety-seven per cent. of all cases. And by the application of the same rules that guide us in ovariotomy, to the treatment of shot wounds penetrating the abdominal cavity, there is every certainty of attaining the same success in these, that we now boast of in ovariotomy." (*British Medical Journal*, March 4, 1882.)

In a rather quaintly written but richly laden book on surgery by Herr L. Heister, Prof., etc., written in 1739, there occurs this passage:

"When the intestines are wounded but not let out of the abdomen, and therefore their wounds are out of reach, the surgeon can do nothing but keep a tent in the external wound, according to the rules laid down at Chapter V., and after this, bleed the patient if his strength will admit of it, advising him to rest, eat abstemiously, and to lie upon his belly; the rest is to be left to Divine Providence and the strength of his constitution. But the question may be asked here whether a surgeon may not very prudently, in this case, enlarge the wound of the abdomen, that he may be able to discover the injured intestine, and treat in a proper manner. Truly I can see no objection to this practice, especially if we consider that upon the neglect of it certain death will follow, and that we are encouraged to make trial of it by the successes of others. Sacherus, in Programmata Publico, Lipsiae, ed. 1720, mentions a surgeon who performed this operation successfully."

A period of one hundred years and more has rolled away since Dr. Heister published his belief and reported recovery, to the time when Dr. Sims expresses his convictions—over a century of doubts, timidity, uncertainty and gloomy misgivings, lightened only occasionally by some bold and resolute assertions. The future asks for action, and it is not unreasonable to assert that careful trials will accomplish successful results.

Avoiding any spirit of dictation, it seems proper to tabulate the following conclusions as an outgrowth of the experiments:

1. Hemorrhage following shot wounds of the abdomen and the intestines, is very often so severe that it cannot be safely controlled without abdominal section; it is *always* sufficient in amount to endanger life by secondary septic decomposition, which cannot be avoided in any other way than by the same treatment.

2. Extravasations of the contents of the bowel after shot injuries thereof are as certain as the existence of the wound.

3. No reliable inference as to the course of a bullet can be made from the position of the wounds of entrance and exit.

4. The wounds of entrance and exit of the bullet *should not be disturbed* in any manner except to control bleeding or remove foreign bodies when present. They need only to be covered by the general antiseptic dressing applied to the abdomen.

5. Several perforations o the intestine close together require a single resection, including all the openings. Wounds destroying the mesenteric surface of the bowel always require resection.

6. The best means of uniting the wounded intestine after resection is by the use of fine silk thread, after Lembert's method. It must include at least one-third of an inch of bowel tissue, passing through only the peritoneal and muscular coats, never including the mucous coat. The everted mucous membrane must be carefully inverted, and needs no other treatment.

7. Wounds of the stomach, small perforations, and abrasions of the intestine, can be safely trusted to the continued catgut suture.

8. Every bleeding point must be ligated or cauterized, and especial care devoted to securing an absolutely clean cavity.

9. The best method of treating the stumps of divided mesentery is to secure them to the intestine at the site of the resection; or, better, to leave the mesenteric surface of the bowel as indicated above. Still this requires further study.

10. *Primary abdominal section* in the midline gives the best command over the damage done, and furnishes the most feasible opening through which the proper surgical treatment of such damage can be instituted. Further, its adoption adds but little, if anything, to the peril of the injury.

11. Is not the moral effect of the assurance to the patient, that he will be placed in a condition most likely to lead to his recovery, a good substitute for the mental depression accompanying the general and popular conviction that his wounds mean certain death?

MEDICAL PROGRESS.

VESICATING LIQUIDS.—At the meeting of the Société de Médecine Pratique, on February 21st, M. DELTHIL presented a vesicating liquid composed of a solution of cantharides in acetic acid, which offers several advantages over the ordinary plaster masses. It is applied in coats by means of a brush. The first coat produces a rubefacient effect, the second a slight vesication, the third ordinary vesication, and the fourth very great vesication.

The advantages of this liquid are numerous: 1. Its action is limited and fixed; 2. Its uid state enables one to apply it to all parts of the body where its employment may be necessary; 3. It is more acceptable to patients, and its action is perhaps less painful than that of ordinary vesicants; 4. It acts more quickly than plasters; 5. The various effects may be obtained by adding to the number of coats; 6. Its advantages are especially seen when used on children.

The action of the liquid may be limited to the desired space by cutting an opening in a piece of cere cloth, as in the application of Vienna paste. Before applying it the surface of the skin should be washed in warm water, and then rubbed dry and red; after applying the desired number of coats, the spot is covered with wadding.—*Journal de Méd. de Paris*, April 5, 1884.

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SCHOOL HYGIENE.

THE question of school hygiene, in which the people are universally and deeply interested, has of late attracted unusual attention, and its discussion is yielding important results. Careful and searching inquiries into the sanitary surroundings of school life, which are being conducted in many localities, reveal a condition of affairs too frequently at variance with the laws of hygiene and sanitary science. These investigations all tend to show that the regulation of school architecture, appointments, and management in accordance with the requirements of sanitary laws, is one of the pressing necessities of the day. Progress is being made in many directions, but it is insignificant when considered in relation to the vastness of the field yet to be improved. Prejudice, associated with a doubt of the need of the proposed innovations, and the cost which they entail, and ignorance of the real necessities of the case, are some of the obstacles to the readjustment of school construction and school administration in conformity with the established principles of hygiene. The remedy is diffusion of knowledge by persistent appeals to the public through the press and other agencies, the free exposure of existing faults, and the reconstruction of school boards and health boards in harmony with enlightened sanitary knowledge.

These remarks have been suggested by the results of a recent inquiry into the sanitary condition of the school-houses of Lynn, Massachusetts, which has revealed numerous defects, prominent among which are those in relation to the important particulars of lighting and ventilation. Massachusetts was among the first, if not the first State, to organize a State Board of Health, which from the beginning has made signal endeavors to improve the sanitary condition of the public schools. Other agencies have been at work, with this same laudable object in view. If in a State in which great attention has been given to the subject, notable examples of neglect of the fundamental principles of school hygiene are found to exist, as exemplified by the city of Lynn, it is fair to presume that elsewhere careful investigation is all that is needed to reveal equally bad, if not worse, examples of neglect.

New York and Brooklyn are now agitating this subject, in view of the unfavorable results of a recent sanitary inspection; and Philadelphia is disquieted because of the unsatisfactory sanitary condition of some of the public schools, which has been brought to light by a partial inspection by the Board of Health.

In Lynn a very prominent fault was insufficiency and objectionable arrangement of light. The construction of the buildings and the arrangement of the desks plainly indicated a want of information in regard to the ratio of window surface to floor space, and the proper arrangement of light required in school-rooms.

Especial attention was also given to the subject of ventilation. The amount of carbonic acid present in the air being taken as a measure of its impurity, it was found that in most of the rooms the air was *very bad*. Careful analyses showed the presence of from 12 to 29 parts of carbonic acid per 10,000 volumes of air, which is a rather startling exhibit when we reflect that 6 parts per 10,000 is the limit beyond which the air is unfit to breathe. In most of the rooms there were less than 200 cubic feet of air per scholar; in some the proportionate amount was only a little over 100 feet. This allotment would require a very frequent change of air every hour to supply the necessary amount of oxygen to each pupil, which it would not be possible to make without creating objectionable draught. The means of ventilation were found to be very inadequate. Under the above conditions of impurity, the air has a devitalizing influence; it enervates the system, impedes healthy development, and lessens the power of resistance against disease, and favors the chances of infection should disease-germs be present in the air.

The experience gained by the inquiry at Lynn is another argument in favor of regular, systematic inspection of schools by competent medical officers. The evils must first be detected before the remedy can be applied, and in no way can this be accomplished with greater certainty and better effect than by entrusting the hygienic supervision of schools to medical officers trained to the work.

DISCUSSION ON TUBERCULOSIS AT THE AMERICAN MEDICAL ASSOCIATION.

THE discussion on "Tuberculosis" at the late meeting of the American Medical Association failed to elicit any results of importance. It revealed, in the first place, that none of those who took part in it had been engaged in practically investigating the subject, except the author of the paper—Dr. Formad, Dr. Ernst, of Boston, and, perhaps, Dr. Welch, of New York; and of these, apparently, Dr. Formad alone had made extensive inoculations with cultures of the bacillus and with indifferent substances.

Dr. Formad's paper was imperfect in that it failed to present in a systematic way the results of his experiments, it having been deemed expedient for some reason that the publication of these should be, for the present, deferred. This, of course, weakened the position he took against the bacillus theory and against the view that tuberculosis is contagious or or even infectious. On the other hand, the replies of those who were arrayed against him consisted mainly in a criticism of his methods, against which some very unfounded aspersions were made, and of his results, in the discussion of methods of staining bacilli, and in the narration of a few facts bearing upon the contagiousness of tuberculosis.

Notwithstanding the fact that the almost unanimous voice of the Section was against Dr. Formad, the only *facts* adduced which actually tended to aid in the solution of the question were those drawn from his own experience by Dr. Traill Green, of Pennsylvania. This veteran member of the Association, characterized at once by his mature years, his ripe experience, and clear head, recalled his experience, of which he had had much, with those engaged in the making of grindstones, many of whom, entering the works with all the vigor and strength of youth, succumbed in a couple of years, despite all precautions, to tuberculosis due to the inhalation of the flinty particles thrown off in grinding the stones. On those dying thus he had made numerous autopsies, and found cavities of large size, together with the other well-known signs of tubercular phthisis. Here, certainly, he said, we have the operation of a cause distinct from the bacillus tuberculosis.

It became evident, too, from the discussion, how very few actual experimenters we still have among us, qualified by their own experience to sit in judgment on those important questions of pathology of which tuberculosis is one.

CREMATION.

THE adverse action taken by the British Parliament last week upon the bill for legalizing cremation, was more than counterbalanced by the practical endorsement of the system in the case of the illustrious Gross, whose remains were cremated at Washington, Pa., in fulfilment of the expressed wish of the deceased. This celebrated example of consistent advocacy of an innovation founded upon strictly scientific and sanitary principles will exert a world-wide and potent influence in favor of the practice, which has much to recommend it, and which is especially applicable to the great centres of population. That there should exist a deeply rooted prejudice in favor of inhumation is natural enough, since the custom has been universally adopted by Christian nations for many centuries. It is not to be expected that such a prejudice, founded upon a universal sentiment, and fostered by the influence of long-continued habit, will yield lightly to arguments based upon expediency and the teachings of sanitary science.

The difference between inhumation and cremation is merely that of mode, the ultimate results being the same. The disintegration of the body in either case is produced by oxidation. In the one case by the slow and corrupt process of putrefaction; in the other by the rapid and purifying action of intense heat, the constituents of the body being converted quickly and harmlessly into gaseous vapors and ashes by the oxidizing agency of fire. From a sanitary standpoint, the advantages of the latter method of disposal of human remains are incomparably superior to those fancied to be associated with the common practice of interment. The sudden transformation to a mass of unrecognizable ashes of the forms of those we have loved and reverenced in life, and love to think of as slumbering undisturbed beneath the sod, does violence to our feelings and shocks our tender sensibilities. But did we reflect upon the ghastly picture of what actually happens when the body is consigned to the earth, there would be less reason to decry a practice which is scientific, rapid, and complete in its execution, and which is devoid of danger to the living.

Cremation is beginning to be recognized as a necessity in very populous places. It rests upon the broad basis of verified sanitary principles, and must eventually succeed in its application among civilized people. The example which we have chronicled is notable because of the personage and of its exceptional character. It is a grand illustration of the influence of a conscientious conviction, derived from an unbiassed study of the question, upon a mind of extraordinary grasp and foresight, and possessed of courage which was not deterred from acting upon such a conviction in the face of widespread prejudice. This closing scene in the drama of a great and eventful life is characteristic of the man, and will not be without its lesson of instruction.

LABOR AND PUERPERALITY IN OLD PRIMIPARÆ.

How far childbirth and lying-in are unfavorably affected by the primipara being old when she first is

a mother, is a question to which considerable professional attention has been given, though probably not as much as it needs. We, therefore, turn with interest to a recent paper by Dr. F. Steinmann, of St. Petersburg, in the *Archiv für Gynäkologie*, 1884, Heft 3, in which he observes that the estimate of the time when a primipara is called old varies between twenty-five years (Fasbender) and thirty-five years (Mangiagalli), but he accepts that which most authorities have adopted—to wit, thirty years. By the way, it of course follows that when a woman marries at twenty-nine years she is an old bride, a truth which one would hardly dare to utter in polite society. Dr. Steinmann's cases are taken from twelve years' statistics of the Petersburg Maternity, during which time there were 28,279 deliveries, and of the women delivered, 645 were old primiparæ. Of the 645, a fraction over 69 per cent. were 30–34; 26.2 per cent. 35–39, and 4.2 per cent. 40 years and over: one of these was fifty-two years old.

A very instructive table of the general mortality of lying-in women and of old primiparæ is given, presenting some very marked contrasts. Thus, in 1875, when the general mortality was three a half per cent., that of old primiparæ was nearly fourteen per cent.; and, again, in 1881, when that of the former was only a half per cent., that of the latter was eight per cent. Certainly, the facts adduced by Dr. Steinmann, which also show a decidedly greater fœtal mortality occurring when primiparity is late, are a strong objection to late marriages.

CORROSIVE SUBLIMATE IN OBSTETRIC PRACTICE.

By general consent, corrosive sublimate has been accepted as the most useful antiseptic, or germicide, in obstetric practice, and its safety has not been disputed. Recently, however, Stadtfeld, of Copenhagen, has published in the *Centralblatt für Gynäkologie* a case in which death, believed to be due to mercurial poisoning, followed an intrauterine injection of corrosive sublimate, the strength of the solution being 1 to 1500. This is altogether an exceptional result, and, beside, the strength of the solution was greater than that commonly used for such injection.

Stadtfeld further objects to the corrosive sublimate because weak solutions, having neither taste nor color to indicate the character of the fluid, may cause serious mistakes; but, to prevent such mistakes, it has been proposed to color the liquid with a small quantity of methyl blue or fuchsine. Really, however, mistakes are almost infinitely improbable, for usually the bottle containing the corrosive sublimate solution is very much larger than a bottle having medicine for internal administration, and besides is plainly marked by the word *Poison*. If we are to reject all colorless and tasteless solutions of medicine which are dangerous in improper doses or uses, our therapeutics will become greatly restricted in some directions.

THE PROGRAMME AT THE LATE SESSION OF THE AMERICAN MEDICAL ASSOCIATION.

We have already said that, on the whole, the recent meeting of the American Medical Association may be regarded as successful. At the same time there were some defects, the calling of attention to which at this date may serve to prevent a repetition next year. The chief of these was that the programme was over-full. It is creditable, of course, to a chairman of a Section to have secured a full programme, but he should, at the same time, see that those whom he invited to prepare papers, some of whom may have come a great distance for this purpose, shall have the opportunity of so doing. Experience has shown over and over again that very few papers offered at the Association can be disposed of in twenty minutes. At the late meeting, several occupied an hour, and some took even more time, including the discussions. This being the case, it is evidently impossible to dispose of nine papers, in a period of three and a half hours. It is evident, too, that one-half that number would have been fully enough for an afternoon's work, especially if one is on a subject calculated to invite discussion, as is always desirable.

Again, all remarks in discussion should be limited to ten minutes. Such remarks are not intended to be disquisitions, and if limited to points brought out in the original paper can easily be included in that time, often, indeed, in less, and where more time is taken, they oftentimes resolve themselves into mere repetitions. It is also objectionable to permit the reading, under the head of discussion, of written essays of considerable length, having in some instances no relation to the points brought out in the original paper, as was done at the late session.

Finally, no paper should be permitted to come up out of its place, or at a fixed time, to the exclusion or precedence of papers on the programme before it. Such a course is obviously unjust to those who happen to precede and who are excluded thereby from reading papers. The programme should be literally followed out in the order printed.

We venture to suggest that, if the above points are remembered at another meeting, it will prove, as far as scientific work is concerned, even more successful than the one just terminated; and there will be, certainly, less dissatisfaction on the part of those whose papers are of necessity left unread, and whose participation in the work gives character to the proceedings.

SOCIETY PROCEEDINGS.

THE AMERICAN MEDICAL ASSOCIATION.

Thirty-fifth Annual Meeting, held at Washington, May 6, 7, 8, and 9, 1884.

(Specially reported for THE MEDICAL NEWS.)

FRIDAY, MAY 9TH—FOURTH DAY.

GENERAL SESSION.

THE Association was called to order at 9.30 A.M.

DR. J. C. DALTON, of New York, offered the following resolutions on behalf of the Committee on

EXPERIMENTAL MEDICINE:

Resolved, That the Committee on Experimental Medicine be empowered and instructed to add to its number and efficiency by the election of associate members from different States, and that it report to this Association at its annual meeting, any matters relating to the subject of experimental medicine which may need the consideration or action of the Association.

Resolved, That in view of the attempts that have been or may be obstructed by restrictive legislation, in the progress of experimental medicine, this Association desires to express its earnest conviction that experimentation on animals is a most useful source of knowledge in medical science; that it is the means by which many valuable discoveries, both practical and scientific, have been accomplished; that its direction and supervision can be properly entrusted only to members of the medical profession; and that its restriction or prohibition by law would inevitably retard the advancement of medical science and the improvement of the medical art. Unanimously adopted.

The Committee on the

NOMINATION OF TRUSTEES OF THE JOURNAL,

reported that the names offered by the Committee were the same as those chosen by the Committee on Nominations as reported yesterday. However, as they believed the action of the latter committee was unconstitutional, they begged that the error be not permitted to go on the records of the Association, but that the action of the Special Committee be approved. A delegate then moved that it be declared the sense of the Association that the Trustees be nominated by the Nominating Committee, in the same manner as other officers of the Association are nominated.

DR. N. S. DAVIS stated that, by reference to the minutes of the Association, it would be found that special action had been taken as to the appointment of these Trustees, in the report of a committee of which Dr. Packard was Chairman, and which was adopted at St. Paul, in 1882, it being therein provided that the Trustees be appointed by a special committeee of seven appointed by the President.

The original motion was then withdrawn and a substitute adopted, that hereafter the appointments be made by the regular Committee on Nominations.

DR. AUSTIN FLINT, as Chairman of the Committee to draft resolutions on

THE DEATH OF DR. GROSS,

reported that it had been impossible to get the Committee together, and asked that the Committee be continued, with power to report in print.

The report of the Committee to consider the

RECOMMENDATIONS CONTAINED IN THE PRESIDENT'S ADDRESS

being called for, DR. N. S. DAVIS stated that some of the gentlemen appointed had left the city, and that the remaining members of the Committee considered it not expedient at present to take any action on the Code of Ethics. They believed that any declaration of this nature should be made only after due deliberation. Dr. Davis then presented, on his own responsibility, the following preamble and resolution:

Whereas, Persistent misrepresentations have been and are being made in regard to the Code of Ethics of this Association, therefore,

Resolved, That the President appoint a committee of five, of which he shall be a member, to report at the next meeting of the Association such explanatory resolutions as the committee may deem proper. Adopted.

DR. GARCELON, of Maine, stated that the Nominating Committee had failed to appoint a member of the Committee on Necrology for the State of Maine. He therefore nominated Dr. Seth Gordon, of Portland, and moved his election. Carried.

DR. DEERING J. ROBERTS, of Tennessee, then delivered the

ADDRESS IN STATE MEDICINE.

He defined the object of the Section to be the application of medical science to the good of the State. Reference was made to the recent and more remote discoveries in medicine, among others to the germ-theory of the origin of diseases. The honor of this discovery he attributed to two Tennessee physicians—Drs. Campbell and Thomas—who, he announced, had discovered the germ of cholera thirty years ago.

The power of sanitary medicine to prevent the spread of disease was illustrated by the recent limitation of the spread of cholera in the East, and of yellow fever in the South. Some remarks were made upon the importance of medical education. He expressed himself as very decidedly opposed to legislation to regulate the practice of medicine, and referred to the notable discoveries, etc., which were made before any such regulation was attempted, also quoting the remarks of the distinguished Daniel Drake, that little or no good is done by laws of that character, and that he did not think the laws of New York and Ohio, which in his time stood alone in that respect, were of any advantage to those States. He also referred to the more moderate views of Prof. Huxley on the subject. He approved of the work of the National Board of Health, as well as of that done by the Marine-Hospital Service, and regretted that any contest should have arisen between them. He then favored certain legislation in regard to medical and sanitary purposes, among other things suggesting the propriety of the President of the United States establishing a Health Department, the chief of which should constitute another member of his Cabinet, with compensation and rank the same as those of the present Cabinet Officers, and whose duty it should be to inspect the working of sanitary measures and suggest to the President from time to time such improvements as might be demanded, and to appoint all necessary assistants and officers.

MISCELLANEOUS BUSINESS.

It was then announced that Dr. Smith Townshend, who was appointed to represent the District of Columbia in the Committee on Necrology, was ineligible to the office, because he had not been a delegate to this meeting of the Association. Upon motion, Dr. Thomas Antisell, of Washington, was appointed in his place.

DR. CHANCELLOR, of Virginia, stated that his name had been placed on the Committee on State Medicine, but that, as he would be unable to serve on the committee, he respectfully requested to be relieved of the appointment.

THE PRESIDENT then announced the following as

THE COMMITTEE ON THE INTERNATIONAL MEDICAL CONGRESS,

which it was proposed should be invited to meet in this country in 1887: Drs. Austin Flint, of New York; I. Minis Hays, of Philadelphia; L. A. Sayre, of New York; Christopher Johnston, of Baltimore; G. J. Engelmann, of St. Louis; J. S. Brown, U. S. N.; J. S. Billings, U. S. A. The Committee was vested with power to augment its numbers.

DR. JOHN H. PACKARD, of Philadelphia, asked that

THE AMENDMENT TO THE CONSTITUTION

which was proposed at the meeting of the Association at St. Paul, in 1882, should now be brought before the assembly for action. The amendment, as read from p. 577 of the volume of *Transactions* for 1881, was "Members by application shall consist of such members in good standing in County or State medical societies as shall make application in writing for such membership." Dr. Packard had offered a paragraph in addition, so that it should read, "Membership shall be acquired by any one received as a delegate; or upon the application of any member in good standing of a State or County society recognized by this Association, the application being accompanied by a certificate from the President and Secretary of his society, testifying to the good and regular standing of the applicant. Members by application shall remain such so long as they shall continue in good standing in their local society and in this Association, and pay regularly their annual dues." The mover of the amendment stated that he believed a measure of this nature would increase the financial income of the Association to an extent that would aid it very materially in carrying out its objects.

DR. J. M. TONER, of Washington, objected to taking action upon this amendment, since it should have come up at the meeting last year, and, having failed in that, it was not allowable, he said, to bring it up now.

DR. J. S. BILLINGS asked, in order to adjust matters, that the amendment be now presented for action at the next meeting.

DR. KINLOCH finally moved that, since it was evidently the spirit of the By-Laws, if not the letter, that amendments be before the Association long enough to be thoroughly understood, and not for any arbitrary period, the amendment offered should be adopted. The motion was carried.

In reply to a question whether members by application should be entitled to a vote in the proceedings of the Association, it was stated that, according to the Constitution, none but delegates had that right.

DR. C. H. VON KLEIN, of Ohio, announced his intention to offer an amendment providing that the Association shall, in the future, no longer receive delegates who are not graduates of medical colleges which require a thorough preliminary education of their students.

SECTIONS TO NOMINATE THEIR OWN OFFICERS.

DR. FOSTER PRATT, of Michigan, moved the following:

Resolved, That the By-Laws be so amended as to require that each Section shall, in the future, elect its own chairman and secretary, other nominations to be made as heretofore.

MISCELLANEOUS BUSINESS.

DR. KELLER, of Arkansas, asked that his resolution on cremation be referred to the Committee on State Medicine. Granted.

DR. ROBERTS, of Tennessee, offered a vote of thanks for the invitation to visit the Museum of Hygiene, and moved that Congress be petitioned to place the Museum on a substantial financial basis; also to provide for it a new home. Adopted.

REGISTRATION.

A resolution was adopted requiring that the Committee on Arrangements and the Permanent Secretary shall provide a method of registration by which delegates may send in their applications and receive cards of membership by mail previous to the date of meeting.

THE NOMINATING COMMITTEE INELIGIBLE TO OFFICE.

A motion was made that it is the sense of the American Medical Association that it is not expedient for the Nominating Committee to nominate any of its own members for election to the offices of the Association.

IMMIGRATION OF THE DEFECTIVE CLASSES.

The resolution offered by Dr. Pratt in the Section on State Medicine was offered and adopted.

A motion was then carried to defer the remainder of the business until after the delivery of the addresses set for the day.

A motion was also passed requiring that the papers remaining upon the programme should be read by title and referred to the Committee on Publication.

DR. J. J. CHISOLM, of Baltimore, who was to have delivered the

ADDRESS ON OPHTHALMOLOGY,

stated that he had intended delivering an address, not so much on the subject of the recent advancement of this department, as to call attention to the need of a more general diffusion of knowledge in this important branch. There are many facts, he said, that have been well established by the specialists which should be in the possession of the general practitioner, but which are generally overlooked by him.

DR. WILLIAM LEE stated that the subject of his

ADDRESS ON DISEASES OF CHILDREN

was "The Recent Advances in the Study of the Infectious Diseases in Children." He regretted very much not being permitted to read his paper, as he considered the subject an important one. The paper was referred for publication.

DR. T. W. BROPHY stated that he had prepared his

ADDRESS ON ORAL AND DENTAL SURGERY,

and had taken for his subject "The Importance of Establishing in Our Medical Colleges a Chair of Oral and Dental Surgery." He also regretted being deprived of the privilege of reading a paper on a subject which he considered so important. The paper was referred.

THE REPORT OF THE COMMITTEE ON NECROLOGY

being called for, DR. J. M. TONER, the Chairman, stated that the works of the Committee had been published regularly in the *Journal* of the Association, and that hence his report had virtually been submitted. He stated, also, that, if agreeable to the Association, the Committee would continue that method of making their report.

STATE CONTROL OF MEDICAL EDUCATION.

DR. FRANZONI offered a resolution that in view of the fact that there was a movement on foot in some of the States to secure a better preliminary education of medical men, as well as to raise the standard of medical education, and in view of the importance of having the same standard adopted, it should be resolved that the members of the American Medical Association in the different States, should endeavor to secure the passage by Congress, or the several State Leislatures, of bills requiring candidates for the degree of M.D. to pass an examination, in all the branches of the medical sciences, before a board appointed for the purpose.

DIVISION OF THE SECTION OF OPHTHALMOLOGY AND OTOLOGY.

DR. CARL SEILER, of Philadelphia, offered an amendment to the By-Laws, providing for the division of the Section on Ophthalmology into two sections, one to include ophthalmology and otology, the other, laryngology, rhinoscopy, etc.

THE REPORT OF THE TREASURER,

DR. R. J. DUNGLISON, showed a balance in the treasury of $2212.07. The report showed no difference in the sources of revenue, except that subscriptions to the *Journal* and payments for advertisements therein, had been added. The report stated that it was the custom of a large number of members apparently to comply with the By-Laws by paying dues for about two years in three, instead of paying annually, and the Treasurer asked that a resolution expressing the sense of the Association in this regard, should be presented.

DR. BRODIE moved the following:

Resolved, That it is the sense of this Association that the continual payment of annual dues shall be necessary to the continuance of membership.

LIBRARIAN'S REPORT.

The Librarian reported that two hundred and forty-nine volumes have been added to the library during the past year, making a total of two thousand and sixty-six distinct titles, or about six thousand volumes, including pamphlets.

THE MEDICAL AND SURGICAL HISTORY OF THE WAR.

DR. J. C. GREENE, of Buffalo, offered the following preamble and resolution:

Whereas, The first edition of the *Medical and Surgical History of the War of the Rebellion* has been long since exhausted, being so distributed by the members of Congress at the time the several volumes were published, as to leave but a small number of volumes for general distribution; and

Whereas, Nearly every physician and surgeon desires to obtain the volume; and

Whereas, The third volume of the *Medical History* has not yet been completed, which is necessary to complete the entire work, therefore,

Resolved, That it is the desire of the American Medical Association that the third volume should be issued at the earliest possible date; also, that Congress be respectfully requested to issue an entire edition of the work known as *The Medical and Surgical History of the War of Rebellion*, to be disposed of at cost, plus the ten per cent. required by law. Adopted.

PLEURO-PNEUMONIA AMONG CATTLE.

DR. BEACH, of Ohio, presented the following resolution, which was adopted:

Resolved, That the members of the American Medical Association consider it important that proper legislation be had before the adjournment of the present session of Congress, to provide for the extermination of the disease among cattle, known as pleuro-pneumonia.

INTRODUCTION OF THE PRESIDENT-ELECT.

DR. HENRY F. CAMPBELL, of Augusta, the President-elect entering the hall, was conducted to the platform.

DR. FLINT in introducing him said: "I have had somewhat the feeling of an usurper since the last meeting. I have felt that I occupied a position to which I had no claim. But that feeling is somewhat ameliorated to-day by the privilege I have of introducing to you my successor. I can freely express the assurance, in which you will all join me, that the duties of the office and the interests of the Association will be well cared for in his hands."

DR. CAMPBELL, in reply said: "I cannot let those remarks pass without a reply. Instead of a usurper, he has honored the place and made the chair—the throne—that I am to occupy more noble. I am highly gratified at being elected the President of the American Medical Association, and I will endeavor to sustain the honor of my office, the dignity of the profession, and the ethics of the Association."

MISCELLANEOUS BUSINESS.

DR. GARNETT moved a vote of thanks to the Postmaster of Washington City for establishing a branch office in the place of meeting, for the Association.

DR. BRODIE offered a resolution that the Board of Trustees be authorized to procure hereafter a stenographic report of the proceedings of each meeting, to be published with the minutes of the Association.

DR. VON KLEIN offered a resolution that the custom of opening the sessions of the Association with prayer be dispensed with. A motion to lay the resolution on the table was unanimously carried.

DR. VON KLEIN offered a resolution that, as a fitting mark of respect to the late lamented Dr. S. D. Gross, the next issue of the *Journal* of the Association be draped with mourning. The resolution was referred to the Special Committee, previously appointed.

DR. LEASURE offered the following, which was adopted:

Resolved, That the Association protest against its members signing certificates as to the action and remedial powers of various proprietary or trade-mark preparations, mineral waters, etc.

A communication was read from the West Philadelphia Medical Society, protesting against the attempts of certain mercenary persons to lay aside the principles of the Constitution of the Association, and the Code of Ethics. A motion to lay on the table being lost, it was referred to the Judicial Council.

A resolution was adopted asking Congress to enact laws which shall require the labelling of all such articles as caustic potash or soda, concentrated lye, etc., as poison, and the regulation of their sale, the same as all other deadly poisons.

COMMUNICATIONS.

A communication from the New Jersey State Medical Society was partially read and referred to the Committee on Publication.

A communication from the St. Louis Medical Society relative to the methods of advertising in use by medical colleges was referred to the Judicial Council.

THE CHAIR announced the appointment of the following

DELEGATES TO FOREIGN SOCIETIES:

To the Canada Medical Association, Drs. William Brodie, W. S. Tremaine, E. N. Brush, and H. O. Walker.

To the British Medical Association, Dr. William Brodie.

To the International Medical Congress, and any other European association that the delegates may choose to attend, Drs. J. W. S. Gouley, of New York; H. D. Didama, of New York; C. C. Wyckoff, of New York; F. Hyde, of New York; W. H. Daly, of Pennsylvania; L. Friederich, of District of Columbia; J. M. Browne, U. S. N.; D. W. Prentiss, of District of Columbia; N. C. Husted, of New York; S. C. Busey, of District of Columbia; T. J. Gallaher, of Pennsylvania; C. Deveny, of Illinois; W. W. Johnson, of District of Columbia; A. M. Pollock, of Pennsylvania; J. S. Billings, U. S. A.; C. E. Vaughn, of Massachusetts; H. O. Marcy, of Massachusetts; J. V. Shoemaker, of Pennsylvania; E. C. Harwood, of New York; H. P. C. Wilson, of Maryland; J. C. Hutchison, of New York; J. F. Gabriel, of Virginia; S. C. Gordon, of Maine; T. L. Estabrook, of Maine; G. T. Stevens, of New York; S. J. Jones, of Illinois; E. M. Dent and Joseph Parrish, of New Jersey; Edward Boeck, of Missouri; Christopher Johnston, of Maryland; J. N. Quimby, of New Jersey; and Austin Flint, Sr., of New York.

THE DEATH OF DR. J. MARION SIMS.

A resolution offered to express the regret of the Association for the death of Dr. J. Marion Sims, and the sense of their loss, was unanimously adopted.

A MONUMENT TO BENJAMIN RUSH.

DR. GIHON called attention to the fact that among all the monuments to the memory of great men for which Washington is noted, there is not one to the memory of a physician. He, therefore, moved that the Association signalize its meeting in this city by providing for the erection of a statue of the eminent Dr. Rush, who was a member of the Continental Congress, a signer of the Declaration of Independence, and intimately associated in various ways with the early history of this country. He further asked that a committee of seven be appointed to consider the advisability of the project. Adopted.

RESOLUTIONS OF THANKS.

DR. BRODIE moved a vote of thanks to the Committee of Arrangements, and other committees, and to the ladies and gentlemen who have given receptions and done so much in various ways to make pleasant the stay of the Association in Washington.

DR. GARCELON, of Maine, moved that the Association return its sincere and heartfelt thanks to the retiring president for the graceful and efficient manner in which he had conducted the proceedings of the session.

DR. FLINT, in response, thanked the Association for the forbearance and coöperation he had received in his attempts to perform the duties of a presiding officer. He also congratulated the Association on the fact that the present had been the largest meeting ever held; on the amount and quality of sectional work that was done, and on the interest and ableness of the discussions in the Sections. "I therefore wish," he said, "the members a safe return home, and a continuance of life and of every happiness."

The Association then adjourned to meet in New Orleans the last Tuesday of April, 1885.

SECTIONS.

SECTION ON PRACTICE OF MEDICINE.

WEDNESDAY, MAY 7TH—SECOND DAY.

DR. R. HARVEY REED, of Ohio, read a paper on

IRRITATION OF THE CAPSULE OF GLISSON.

This is a periodical affection located in the liver or capsule, affecting the tunic of the liver and penetrating to the lobules of the organ, and often partakes of a rheumatic character. It is characterized by darting pains of a burning or boring character, coming on usually at night. It is not ushered in by a chill, nor is it accompanied by febrile disturbance, loss of appetite, headache, or constipation. It occurs sufficiently often to merit special attention, as Dr. Craig, of Ohio, says he has seen five cases in a year, and the author has observed it twenty-five times in six years. The affection generally attacks those who follow sedentary occupations, and is more frequently observed in women. It is a disease of middle life, is more frequent in those not addicted to alcoholic stimulants, and is often associated with rheumatism. Its onset is often insidious, the patient feeling, at times, slight pain in the hepatic region, to which he pays but little attention. With each return, however, the attacks become more severe and the intervals shorter. The history of a paroxysm would be somewhat as follows: The patient goes to bed well, is awakened by severe pain of the character above described, which in the less advanced stages of the disease will subside by morning, leaving the patient as well as usual. With each return the severity as well as the duration of the attack increases, and it sometimes lasts for several days. The pain is confined to the hepatic region, and is burning, boring, and lancinating in character. The tongue may be somewhat furred,

and there is sometimes vomiting, but there is no increase in the temperature, nor is there headache or jaundice. There is slight tenderness on pressure over the liver, it is not perceptibly harder, there is no change in the size of the organ, and no sign of hob-nail liver. The stools contain no gall-stones, and the urine is normal. In the later stages of the disease there may be a certain amount of emaciation. This disease must be differentiated from hepatic colic, interstitial hepatitis, congestion of the liver, perihepatitis, cirrhosis, and hepatalgia. Hepatic colic is excluded by the gradual onset and increase of the disease, by the occurrence of the attacks at night, whilst in hepatic colic they may occur at any time, especially after meals or exercise. The vomiting which so frequently accompanies the colic is generally absent. The absence of jaundice and failure to discover gall-stones in the stools complete the differential diagnosis. *Interstitial hepatitis* is differentiated from irritation of the capsule by its connection with alcoholic excesses; by the appearance of venous stigmata on the cheeks, etc.; by the presence of jaundice; the pain over the liver is constant instead of intermittent; there are nausea and vomiting on rising, and the loathing of solid food; diarrhœa alternates with constipation, and the urine is scanty; there is occasional pyrexia, and there is obstruction to the portal circulation, and enlargement of the liver, followed by contraction; there is often ascites, and a dry, harsh skin. Besides this, interstitial hepatitis is often the result of syphilis, while irritability of the capsule seldom is. In *congestion of the liver* there are enlargement, a continued sense of tightness in the hepatic region, jaundice, nausea, anorexia, furred tongue, headache, disturbances of digestion, vomiting, diarrhœa, dyspnœa, drowsiness, signs of portal obstruction, urine scanty and high-colored, temporary albuminuria. The attack continues without interruption. In *perihepatitis* there is peritonitis, and the inflammation may extend to the capsule of Glisson. It may arise from traumatic causes. It is ushered in with a chill, followed by fever, and there is much superficial tenderness.

Inflammation of the bile ducts occurs mostly in children and old persons. There is obstruction to the entrance of bile into the duodenum—jaundice; it is preceded by gastro-intestinal catarrh, the pulse is slow, and there is no bile in the stools; while in irritation of the capsule, the stools are normal. *Cirrhosis of the liver* can be readily differentiated by its history and signs. *Hepatalgia* is extremely rare, and occurs only in nervous women, being a purely functional disease. Irritation of the capsule may continue for years, and, if left to itself, has no inherent tendency towards recovery, but the prognosis as regards life is good. There are few diseases which yield more quickly to well-directed treatment. The author relies mostly on alkalies and bitter tonics—his favorite combination being bicarbonate of soda with pulv. hydrastis canadensis. Sodæ et potass. tart. and infusion of gentian are often serviceable. Mercurials are seldom useful. It should be remembered that it may be complicated by rheumatism, malaria, and disease of the liver, which must, of course, affect the treatment. Stimulants and condiments are to be avoided, regular habits enjoined, and active exercise according to the patient's strength advised. Baths containing chloride of sodium, conjoined with rubbing, are beneficial. During the attack, morphia may be used hypodermatically, and local application of heat affords relief. Anodyne treatment should be suspended as soon as possible.

DR. WILLIAM PEPPER, of Philadelphia, then read

A CONTRIBUTION TO THE CLINICAL STUDY OF EPILEPSY.

He said that our conception of epilepsy is necessarily broad and somewhat vague. It would be well to exclude, if it were possible, from the category of the affections grouped under this name, all cases in which there are definite anatomical lesions, but while this can be done in certain cases, *e. g.*, where there is a cerebral tumor, it is often impossible, and probably a large number of cases of so-called epilepsy are really associated with some anatomical lesion. He referred to a case of a physician who was forty-four years old when he died. When he was twenty-three years old he had received a severe injury to his head, which was followed by convulsions. He recovered and engaged in active practice. After eighteen years he had a convulsion following a period of over-work. After this, convulsions returned every four to six weeks without any cerebral symptoms. Bromides failed to produce any effect, but temporary recovery followed the use of the actual cautery and rest. A relapse occurred on returning to work; trephining was resorted to, and a depression of the internal table of the skull was found and raised; a spicule of bone was found pressing on the brain, in which were two small abscesses. These were certainly caused by the injury eighteen years before. Besides the difficulty of excluding anatomical lesions, it is sometimes hard to exclude hysteria, and the two conditions are sometimes combined.

One of the fundamental elements in the production of epilepsy is morbid instability of nerve tissue. Heredity has a marked effect, and so has nervous exhaustion from rapid growth or after severe diseases, as typhoid fever and scarlatina. A very frequent cause is shock, whether psychical, or from mechanical injuries, or, and this very frequently, sunstroke. Instability of the circulation through the brain is an important factor, as are also anæmia and cardiac disease; so also, prolonged peripheral irritation, as in protracted teething, undue sexual excitement, and intestinal irritations. Epilepsy is then not a distinct disease, but results from morbid instability and irritability in the gray matter of the encephalon. There are cases which are marked by progressive molecular changes, and more or less regular manifestations, but this is uncommon. The evil effect of habit is often seen in this disease, and unless the tendency is avoided, the attacks become more frequent. Sometimes the slightest cause is sufficient to bring on an attack, such as a noise or an indiscretion in diet—this last is a frequent cause, by impairing nutrition and lessening the stability of the nerve tissue, either by reflex action or by the blood being poisoned by the products of malassimilation.

It is not infrequently associated with lithæmia. It often follows scarlatina, either from exhaustion from the disease, of widespread tissue changes, or by inducing renal changes, which, while not sufficient to show the existence of albumen, are sufficient to cause a certain amount of toxæmia. Dr. Pepper called attention to the frequency of the prodromic signs which occur in epi-

lepsy, such as loss of appetite, pains in various parts of the body, changes in the appearance of the face, foul breath, digestive disturbances, and dwelt upon the effect of excitement in the production of the attacks, whether the excitement be from sexual intercourse or alcohol, from intellectual over-work (especially noted when there was competition, as in examinations), or from anxiety. Over-work or severe strain, especially when connected with cardiac disease, excessive heat, brilliant sunshine, bad air, all conduce to bring on an attack in those who are subject to epilepsy. It rarely happens that epileptics are in really good health.

In regard to the treatment, Prof. Pepper thought that while the bromides were of incalculable benefit, they had been used too much as matters of routine treatment, and had led to the overlooking of the still more important subjects of attention to dietetics and hygiene, and the administration of medicines on general principles. The bromides control, but do not cure epilepsy. The peculiarity of each case must be studied, and a suitable regimen must be inaugurated, and the primary, underlying, or provoking causes must be searched out and treated on general principles. Thus, lithæmia and anæmia must be met with appropriate medication, and very often it will be found that prolonged rest is most serviceable. This is especially the case where there is cardiac involvement. In these last cases, also, digitalis is often found useful. So also gastro-intestinal irritation must be treated when present. In these cases, silver nitrate, zinc, or arsenic is valuable. Where there is any local irritation it must be removed. Counter-irritation, as by actual cautery to the spine, is most useful, especially where there seems to be cranial involvement. It is specially useful in cases caused by sunstroke. Trephining should be done oftener than it is. The influence of adherent prepuce has been somewhat overestimated. Pure milk diet is often useful.

During the attack nitrite of amyl is most helpful, and is important for the breaking up of the habit. Returning to the bromides, he thought they often injured by irritating the stomach. He used them in the smallest dose that would have the desired effect. He had often seen enemas of chloral hydrate act admirably. This mode of administration is specially indicated in cases in which there is irritability of the stomach.

Prof. Austin Flint, of New York, in opening the discussion, presented

AN ARGUMENT FOR THE TOXICAL PATHOLOGY OF EPILEPSY.

He did not consider this out of place in this discussion; the treatment must, in the end, depend upon pathology. There is at present an absence of any distinct pathological doctrine on epilepsy. It has no established anatomical character. It is essentially a neurosis, without known causative conditions. There are no distinct prodromata to the attacks; the aura is mostly wanting, and has no special significance. The various theories maintained by Hughlings Jackson and others do not really furnish explanations of the disease. The field, then, is comparatively clear of old theories to be taken out of the way. There is a close analogy between epilepsy and states of the system produced by toxical agents, as uræmic convulsions. It is now generally accepted that these convulsions are caused by retained substances in the blood that should have been excreted by the kidney. But he remembered the time when the pathology of uræmic convulsions was as much a mystery as that of epilepsy is now. Sometimes uræmic coma, etc., simulate epilepsy so completely as to require an analysis of the urine to make a differential diagnosis; and again, when the epileptic attack is of long duration it may simulate the uræmic condition. This would seem to show that the pathology of epilepsy is toxical. The clinical history, the absence of ailments prior to the attack, the short duration and quick recovery, seem to point to the effect of a transient poison in the production of the seizures. This does not exclude, however, the effect of local conditions. Pathology has not yet given successful direction to the therapeutics of epilepsy. The more recent remedies introduced seem not to be curative, but to enable the nervous centres to tolerate the presence of the poison.

The *modus operandi* of the poison, as well as its nature and source, remains to be discovered. Then, when these are found out, we shall be able, with more hope of success, to discuss how to prevent the formation of the poison, neutralize its effects, and eliminate it from the system.

Dr. Eugene Grissom, of North Carolina, had seen a large number of cases of epilepsy, but they have generally been at an advanced stage of the disease. He considered it as often an organic affection, and it is usually inherited. It is generally preceded by eclamptic attacks during childhood, and shows itself about the age of puberty. It may represent chorea, or some wasting disease in the parent. It may occur in the offspring of syphilitic or scrofulous parents. It may be the last development in a long course of family degeneration, as in the royal house of Spain. No course of treatment can in one lifetime restore the injuries of generations. It is caused by innutrition of the nerve centres as opposed to malnutrition. The circulation itself is disordered, and the stimuli given to restore the organism to its normal condition may be transformed into excitants. When the disease is functional it is more hopeful. It is the more frequent form, and is protean in its manifestations. It is induced (1) by draughts on the vital powers of any kind; (2) irritation of the peripheral trunks. It is apt to expend its power chiefly on the most used muscles of voluntary motion. It is often associated with anæmia. The treatment calls for regular, systematic, but unfatiguing, exercise; for influences that will build up and develop the *whole man*. Special complications demand treatment adapted to these conditions. He recommended preparations of zinc when there seemed to be pneumogastric irritation.

Dr. James F. Hibberd, of Indiana, doubted the advisability of always administering drugs. Excluding cases in which one can recognize the existence of an exciting cause, he did not believe that epilepsy could be cured. Medicine, at most, will only arrest its manifestations for a time. Every individual has his own standard of health. When that is reached, all remedies should be stopped. He believes there is such a thing as a convulsive diathesis. Individuals who suffer from it will have epileptic seizures from causes that might produce only headache in an ordinary person.

Dr. J. J. Caldwell, of Maryland, doubted whether cases lasting for years could be of toxæmic origin.

DR. JAMES TYSON, of Philadelphia, recommended the use of a seton through the nape of the neck. He had known one case in which it was tried fifteen years ago, and there has been no relapse since.

DR. E. M. BARTLETT, of New York, also recommended setons, and united in Dr. Pepper's warning against the indiscriminate use of bromides.

DR. BALTEEN, of Massachusetts, had great faith in the use of bromides, but would vary the salt in different cases, using potassium bromide in plethoric cases, sodium and iron bromides in anæmic, and lithia bromides in gouty cases. He had seen good effects from physical influences, such as causing patients to use the spirometer, the peculiar noise seeming to affect their minds. He used wine of ipecac, five drops every three hours, in cases of disordered stomach.

DR. PEPPER, in closing the discussion, agreed with Dr. Flint in referring certain cases to a toxic origin, but did not consider that this explained all the cases. It is important to remember that the generation within the system of the products of malassimilation is capable of producing convulsions. He would reassert the supreme importance of attention to dietetics and hygiene, without which no drug is of any avail.

DR. J. C. WILSON, of Philadelphia, then read a paper on the

DIAGNOSIS OF TUMORS OF THE ANTERIOR MEDIASTINUM.

He described this region as a physiological and anatomical "no-man's land," of very slight importance in health, but pathologically of great importance, and often neglected. The distinction which should be made between growths in the posterior and anterior mediastinum, for scientific diagnosis and treatment, is often overlooked. Disease is found in this locality in two forms: First, purulent inflammation of the tissues; second, new growths. Simple acute inflammation is unknown. There is one case on record of inflammation resulting in a solid exudation. Abscess, on the other hand, is not uncommon. The growths are divided into cysts (generally dermoid, and very rare), lipomata, fibromata, and osteomata, exostoses, tubercular disease in the glands, gummata and lymphoma, carcinoma, and sarcoma. Tubercular disease in the glands of the mediastinum is less frequent than in the bronchial glands and cannot be diagnosticated. The first mentioned of the above varieties are very rare; the last three are the most common. Carcinoma is always secondary in this locality, and primary sarcoma is rare. Lymphoma is the commonest form. It occurs in the glands, and rapidly involves the surrounding structures. It must attain a sufficient volume to press on the neighboring organs to be discovered. It is to be diagnosticated from aortic aneurism and tumors in the posterior mediastinum. Physical signs merely reveal the presence of a tumor, but do not show its special character. The symptoms are: pain of a superficial character, dyspnœa, scanty expectoration, and dysphagia, with paroxysmal intensification of the symptoms. There is no fever; nutrition is good, except when the œsophagus is pressed upon. Among the signs are: Repletion of veins of the face, prominence of eyes, livid lips, arborescent condition of varicose veins upon the chest, enlargement of the chest above the fourth rib, enlargement of the thymus gland, when present, and of glands in the axillæ, asymmetrical expansion of the chest on pressure, displacement of the heart, increased dulness over the upper part of the sternum corresponding to the size of the tumor, and dulness in the interscapular region, if the growth be large. The auscultation signs are somewhat modified. Cardiac sounds are feeble, though sometimes intensified over extra-precordial region over the tumor. There is no stridulous breathing, but enfeeblement of the respiratory murmur, if a bronchus of one side be obstructed. *The enlargement of the veins* distinguishes it from tumor of posterior mediastinum. Aneurism is excluded by the history, by the absence of thrill, by the early age at which the disease occurs, and by the stitch-like, superficial character of the pain. Pericardial effusion is excluded by the irregular outline of dulness, by its higher level, absence of fever, and by the history and progress of the case. Excision of the sternum has been resorted to with some success. The existence of malignant disease in other parts of the body is a great help in the diagnosis. Abscess may occur from blows, caries, or operations in the vicinity. There will be constitutional symptoms: Chill, fever, deep-seated pain, and pointing of the abscess. The paper concluded with some remarks on the rarer forms of disease in this locality.

DR. WM. H. WELCH, of New York, then read a paper on the

PATHOLOGY OF MYOCARDITIS.

The neglect of this disease by practitioners is caused partly by the difficulty of diagnosis and partly by absence of proper descriptions in the text-books. It is far more important than fatty degeneration, which generally receives a great share of attention, and many of the supposed symptoms of the latter are really due to disease of the coronary arteries. Many autopsies after sudden death, have shown the only appreciable cause to be lesions of these vessels. Myocarditis may be acute or chronic. The acute may be of a parenchymatous or interstitial type. The parenchymatous is a degeneration of tissue, and not properly an inflammation. The interstitial form may occur either as an abscess of the heart or as a non-suppurative inflammation. It may be circumscribed or diffuse. It may occur in the course of diphtheria or the acute infectious diseases. It is important to observe that *this disease occurs very often without the coexistence of either pericarditis or endocarditis*. The view that it is secondary to either of these diseases is incorrect. Fibroid myocarditis is generally associated with obstructive lesions of the coronary arteries, and may be caused by sclerosis or obliteration of the arteries or by thrombosis or embolism. Inflammation does not come first, but degeneration and atrophy. The disease is not referable to syphilis or chronic Bright's disease, and often attacks patients in well-to-do circumstances. He had made autopsies of myocarditis which may be clinically grouped as follows: *First*, where there was no symptom of heart disease. *Second*, sudden death without previous heart symptoms. *Third*, sudden death preceded by one or more attacks of angina pectoris. *Fourth*, with cardiac insufficiency of few days' standing. *Fifth*, in cases of old cardiac disease.

DR. FLINT, of New York, said that the cardiac symptoms and signs of this disease are purely negative—an

autopsy after sudden death alone revealing the existence of disease in the coronary arteries. In cases which we would diagnose as functional disease of the heart, it is well to make a mental reservation as to the possible existence of these lesions which might cause sudden death; but in such cases the chances are so strong that the disease is not present, and the importance of encouraging the patient so great, that it is wiser not to state our apprehensions.

Dr. Frank Donaldson, of Baltimore, thought we might at least suspect the presence of the disease by the weakness of the cardiac impulse, by the sphygmograph, and by the existence of disease in other arteries.

Dr. Gaspar Griswold, of New York, then read a paper on

IRREGULAR APOPLECTIC ATTACKS FROM OTHER CAUSES THAN HEMORRHAGES OR EMBOLISM.

The paper contained records of cases in which patients had been attacked with all the symptoms of apoplexy, so as to deceive the attending physician into giving a grave prognosis, but recovered rapidly without any after ill effects. So closely was apoplexy simulated, that in a number of these cases there was not only unconsciousness, but transient hemiplegia. The author considered that the cause of the apoplectic attack in cases of hemorrhage or embolus, is a disturbance of the intracranial circulation. In cases of functional disorder, the same effect is temporarily produced, and therefore, at first sight, it is difficult to distinguish between them. He considered that cerebral anæmia was more frequently the cause than cerebral hyperæmia. The exciting cause may be prolonged anxiety, as in business matters, indiscretions in diet, etc. It is sometimes preceded by anæmia. The various cases were related in detail. The differential diagnosis is to be made by the short duration of the case. The only exception to this is in cases in which there is inequality of the pupils. This phenomenon Dr. Griswold considered to be proof positive of genuine apoplexy.

Dr. E. G. Janeway, of New York, spoke of two similar cases which had been brought on by excessive smoking. On leaving off the use of tobacco there was no further return of the attack.

Dr. Austin Flint, Jr., of New York, spoke of the importance of the cerebral circulation in its influence on the symptoms in these cases. Loss of blood produces convulsions from the extreme exaggeration of the *besoin de respirer*. From his own experiments he thought this due to the cutting off of arterial blood from the medulla oblongata.

THURSDAY, MAY 8—THIRD DAY.

Dr. Austin Flint, Jr., of New York, read a paper entitled

THE DIETETIC TREATMENT OF DIABETES MELLITUS.

He said that it occasionally happens that the presence of sugar is detected in persons who seem to be in thoroughly good health, though this is very rare. From an extensive experience in examining for life insurance, he would estimate that it occurs in one person out of every three hundred and seventy-seven persons. In most cases attention is called to the trouble by the symptoms. There are thirst, polyuria, dryness of the feces and of the skin, weariness on exertion, etc. Pruritus of the vulva is an extremely common occurrence, and, when not explicable otherwise, should always lead to an examination of the urine. The usual symptoms, however, are not always all present by any means. As to the detection of sugar in the urine, which is, of course, *the sign* of the disease, he said that the great desideratum has been a test that would be simple and easy and yet accurate. Fehling's test when accurately used is certain, but it is apt to become inoperative when the solution is kept for a long time. He considered that two liquids which had been prepared by Squibb, of New York, answered every requirement. Without taking the time to describe them fully, he gave the method by which they should be used. Mix equal parts of the two fluids and pour the mixture into a test-tube to the depth of an inch. Bring it to a boil. Then add an equal part of urine and bring the mixture thus made to a boil. Then allow it to cool. These steps are most important to be observed. If on cooling there is no distinct opaque yellowish or reddish precipitate, there is no sugar. The promptness and amount of precipitate indicate aproximatively the amount of sugar. For the more accurate determination of this, the differential density method of Roberts is good. The specific gravity of urine has no definite relation to the amount of sugar. Owing to the proportion of urea, diabetic urine may have a specific gravity as low as 1011. Normal quantity and specific gravity of urine do not *exclude* the existence of diabetes.

The author then touched upon the symptoms, etc., of the disease, and to some extent upon the glycogenic function of the liver. In this connection, he said that he thought his own experiments had harmonized with those of Bernard and Pavy. He believed that sugar was formed in the liver, but was very rapidly washed out of the organ by the blood current. The discovery of Bernard, however, had not thrown the light upon the etiology of diabetes that had been hoped at first. Besides the sugar from the liver, we have the sugar resulting from digestion. In diabetes much of this is discharged through the kidneys. The failure of the body to consume the hydrocarbons results in a loss of heat. The temperature is below normal. He spoke of a patient of his whose temperature is 96.5° F. How far can diabetes mellitus be treated? Cantani says, "Diabetes has become a disease *easily and certainly curable*, if treatment be not begun too late." Dr. Flint did not think this statement extravagant when we consider the results of the dietetic treatment, provided it be submitted to. A cure is the result or, at least, a removal of the symptoms, except an occasional slight glycosuria. Our main reliance is upon diet, which must be one that *absolutely excludes starch and sugar*. This is difficult to enforce. There is often a craving for starchy food, especially bread. There are numerous so-called antidiabetic breads, which are said to contain no starch. Dr. Flint has had many of them analyzed. They are all frauds, sometimes containing more starch than ordinary bread. If the patient will not submit to the diet, he may be allowed a piece of the crust of a roll with plenty of butter twice a day, under protest. The craving for starchy food and for sugar diminishes. It is difficult to make a diet-table of foods that do not contain these ingredients, but it can be done, especially if

the patient be in well-to-do circumstances, and he may live even luxuriously. Even in mild cases this rigid regimen must be kept up for at least two months. Then a gradual return to usual diet may be allowed, the urine being examined every five days, and the strict diet at once enforced if any sugar be found. As regards general treatment, the action of the skin must be excited, general untiring exercise, a mild course of training, massage, Turkish or Russian baths, may all be tried in cases in which they are not contraindicated. The patient must not drink much. The anti-diabetic diet will lessen the thirst. The sucking of cracked ice is good. Alcoholic drinks are injurious and should be avoided, especially champagne and spirits are to be interdicted. If something of the kind must be taken, claret in small quantities is the best. The patient cannot bear sustained effort, and all causes of mental anxiety must be avoided. As a rule, the insomnia does not require narcotics. When boils appear, sulphide of calcium is of great benefit, though it does not affect the disease itself much. The lowered temperature of the body makes great care necessary to avoid taking cold.

The medicine which he recommended chiefly, was Clement's solution of the arsenite of bromine, in three-drop doses three times a day in a wine-glassful of water (two drops represent one-twenty-fourth of a grain of the salt). The system can tolerate this drug for months. But no drug will be of use without diet. Patients should be informed that they are suffering from a serious disease and must follow directions. There is always danger of a relapse.

DR. H. F. FORMAD, of Penna., then read a paper on

TUBERCULOSIS.

The author regretted that his remarks on this occasion had to precede the publication of investigations which he had recently undertaken in the laboratory of the University of Pennsylvania. These investigations will soon be published, with full details of the methods adopted, etc., and will substantiate the views he was about to announce. He hoped the Section would understand that he did not regard the question as a personal one; he wished to learn, and would take any objections in good part.

The recent advances in mycology have received great attention among investigators, especially the discoveries of Koch in regard to the tubercle bacillus. These are of great importance and demand close consideration. He would divide the subject into three headings: (1) The contagiousness of tuberculosis; (2) a brief definition of Koch's present position; (3) objections to Koch's theories—which objections remain unanswered.

(1) *Contagiousness.* This is a most important question, clinically and socially. Besides this, the acceptance of the bacillus theory hangs upon the contagiousness of tuberculosis. If the disease be not contagious, the parasitic theory of the disease falls to the ground. There is no satisfactory clinical evidence of the contagiousness of the disease. The cases that have been reported in which the wife or the husband contracted phthisis after nursing the partner who had consumption are only seeming exceptions, for scrofulosis may be acquired by unhealthy surroundings. Besides this, the great prevalence of consumption makes it necessary to show that the individuals who are said to have been infected were not by inheritance predisposed to the disease. The theory that children become scrofulous by contagion from phthisical parents is untenable, for they will become scrofulous even if they are taken from their parents. The investigation made under the auspices of the British Medical Association, showed that out of 1028 cases of consumption 623 furnished no evidence of contagion, and only 261 seemed to be in favor, but among these the causes of error (family history, surroundings, etc.) were not eliminated. Isolated instances of apparent contagion cannot be placed against the thousands of cases of the closest intimacy between the diseased and the well, without any spread of the complaint whatever. The experiment has been tried of direct inoculability of the disease in man. There is a celebrated case in which a man already half dead was inoculated. He died in three weeks. Laennec inoculated himself, and *twenty years afterward* died of tuberculosis—and this is cited in support of the contagion theory! Bearing on this we have experiments, in Würzburg, where the sale of tuberculous meat is not prohibited. Whole families were fed on the infected meat—often using it raw. They were under supervision for many years. Yet in no case did consumption occur—in fact they throve on the diet.

Neither is there analogy between tuberculosis and other contagious diseases. If we claim immunity from the latter, we know how it comes, either from a previous attack of the same disease, as in scarlatina, etc., or from other processes (as in vaccination). This is not the case with tuberculosis. If there is immunity, it is in the system. Predisposition also is constitutional, as can be proved both by macroscopical and microscopical appearances in the scrofulous child. Beside congenital predisposition, there may be an acquired predisposition. This may be brought about by unhygienic surroundings, etc. Tuberculosis also may be acquired by injuries of the serous membranes even without external openings, as in pleurisy, etc. Cohnheim gave a fresh impetus to the theory of contagion. He succeeded in inducing tuberculosis by injecting tuberculous matter into the eye, while innocuous substances did not produce the disease. In publishing these experiments, he slurred over his former experiments with innocuous substances in the peritoneum which had produced tuberculosis.

(2) *Koch's Theory.* Koch has proved that in all tuberculous deposits, whether in the lung or in organs secondarily affected, the tubercle bacillus is found, and that this bacillus is not found elsewhere. He says the bacillus is chiefly found in the youngest tuberculous deposits. He then by his culture methods isolated the bacillus, and with the bacillus obtained by culture he inoculated healthy animals and produced tuberculosis and found the bacillus present. He inoculated other animals from these, and again produced tuberculosis. This bacillus only thrives in animal substances and at the temperature of the body. From these facts he concludes that this bacillus has the same causative relation to tuberculosis that anthrax bacillus has to splenic fever. If all he claims is true, he has satisfied the scientific requirements of the case. But while his facts are true, his conclusions are faulty. Koch the mycologist is right, but Koch the pathologist is in error. The evidence is not yet all in, and we must pause before we accept his teaching.

(3) *Objections to Koch's Theory.* These are not personal in any sense. The etiological relation between the bacillus and tuberculosis is not evident, because the bacillus, while usually present, is not found in all cases, and sometimes when it is found there may be only one or two bacilli in one section; that is, they are not in sufficient quantity to be considered causative. Again, the weight of evidence, and with this Dr. Formad's experiments agree, is that they are most frequently found in old cases and are not so often present in the beginning of the process—in fact, are often absent. But if Koch is right, the bacillus should be present in all cases, especially in the early stages. The truth is, the bacillus is a mere concomitant of degenerated cheesy materials. Even Koch allows that pus without the presence of the bacillus when inoculated from tuberculous deposits may cause tuberculosis, but he suggests the existence of spores. This is a mere assumption which can neither be proved nor disproved. May it not be true that the cheesy deposits furnish a suitable soil for the bacillus to grow upon, and that without this soil they will not grow?

It has not been proved that the disease as produced in the lower animals is identical with the disease in man, although the bacillus in both may be the same. The lesions are not always tubercular. Those resulting from the inhalation-experiments, which showed the presence of miliary nodes in the lungs, have been shown to be merely foci of catarrhal pneumonia. The nodes are simply inflammatory products which can be wiped out with a camel's hair-brush, leaving healthy lung. Some of Koch's experiments are of the same character. They only relate, at any rate, to rapidly produced tuberculosis. If sufficient time be allowed, any substance will produce the disease in animals predisposed to it. Again, experiments on animals cannot be made to prove anything in regard to man, nor can the effect of an experiment on one animal be predicated from its effect on other animals.

We are too apt to forget that the question is not whether the bacillus produces tuberculosis, but whether other and innocuous substances can produce it. Koch's proof-experiments in this direction are valueless. As there is good evidence that the disease can be produced by innocuous substances, it is not fair to assume that the bacillus must have entered somehow. Tuberculosis may exist without the bacillus, and *vice versâ*. Either, then, Koch is wrong on anatomico-pathological grounds, or tuberculosis must be reclassified into that with and that without the bacillus.

In conclusion, neither the specific action of the bacillus nor of tuberculosis is proved. The bacillus is valuable in diagnosis, but it has no bearing upon the etiology of the disease. On social grounds, the acceptance of the bacillus theory would be disastrous. There is a poison in tuberculosis, but it is generated by the body itself. Tuberculosis bears an analogy to carcinoma from a pathological point of view.

Dr. Austin Flint, of New York, said that the contagiousness of phthisis is a side issue. If tuberculosis be caused by a parasite, it is contagious, and clinical facts must be explained in accordance with this view. The question is: 1. Is there a parasite? Yes. 2. Is it uniformly present? The burden of testimony goes to show that it is, so that the exceptions may almost be put down to the want of skill in the observer, or some accidental cause. 3. Is the bacillus found in morbid products, not tuberculous? As a rule, no. 4. Can tuberculosis be produced by this parasite alone in the lower animals? Yes. Dr. Formad assumes that the disease may involve a parasite, but not be due to the parasite. This is opposed to the general laws observed in parasitic disease. If a parasite be proved to bear a causative relation to tuberculosis, it must be the cause *par excellence*, though predisposing causes may exist, and help.

Dr. Welch, of New York, said that the necessary proofs for the bacillus theory of tuberculosis are forthcoming. The bacillus is almost constantly present in the disease. It has been isolated, and has produced tuberculosis, and inoculation with other substances does not produce it. When Koch first published his discovery, reports of cases in which the bacillus was absent were frequent. They are now becoming more and more rare, as the skill of the operators is improving. All observers admit that it is present as a rule.

He defended Cohnheim's experiments on the eye, referred to by Dr. Formad, and said that, so far from slurring over his experiments on the peritoneum, Cohnheim repeated them with greater precautions, and found them unsuccessful. Is it certain that the lesions produced by innocuous substances are really tubercular. To prove them so, they must contain the bacilli, and be able to convey the disease. This is not, he said, a *petitio principii*, as the presence of the bacillus in tuberculosis is proved. So far from the parasite not being present in recent cases, it is most frequently present in such lesions.

Dr. George M. Sternberg, U. S. A., was inclined to think that the bacilli might act as the carriers of infection. They needed a tubercular soil. Dr. Formad's theory of their acting as irritants is worthy of consideration. He would like to know whether the bacilli were found in cases in which innocuous substances had produced the disease, and had the disease the same history as when caused by inoculation with the bacillus. He thought the bacillus necessary to cause cheesy degeneration and auto-infection. In regard to Dr. Formad's experiments, if they were really carried on with all possible precautions, and the animals experimented upon kept isolated, then the bacillus is not the only cause of tuberculosis. He had doubts, also, as to whether Koch's method of cultivating the parasite upon the surface of the culture-material was likely to produce a perfectly pure bacillus.

Dr. R. H. Fitz, of Massachusetts, said that Koch's view is, that the inflammations themselves are the result of the bacillus. In regard to Dr. Formad's experiment with innocuous substances, there must have been some error. The air of pathological laboratories is full of bacilli.

Dr. James Tyson, of Pennsylvania, was disappointed that Dr. Formad had not given his experiments to the Section. He was yielding more and more to the accumulating evidence in favor of the bacillus, and referred particularly to the experiments of Fischer, published in Koch's last report, in which sterilized and non-sterilized tuberculous sputum was used, the former causing tuberculosis when inoculated, the latter not. He did not think that tuberculosis must, therefore, be contagious. It may be infectious, as malarial fever is.

Dr. Janeway, of New York, agreed with Dr. Welch.

In respect to contagiousness, he did not think that the clinical side of the question should be discarded. His clinical experience had induced him to believe in the contagiousness of the disease. This, so far from being a social injury, will be a social benefit, as preventive measures can be taken. He detailed several cases to prove his point. Among others, he mentioned the case of three dogs who were petted in succession by a tuberculous master, who took them to bed with him, and all of them died with symptoms of phthisis.

DR. CHARLES DENNISON, of Colorado, spoke of the analogy between tuberculosis and fibroid condition of the lung and also croupous pneumonia. The distribution geographically of croupous pneumonia and consumption is very nearly alike. He showed four carefully prepared maps of the United States, on which the relative dampness, etc., of the various sections were diagramatically represented by various colors. He divided the country into regions of (1) excessive dryness, (2) moderate dryness, (3) excessive moisture, (4) and moderate moisture. The four maps represented the state of different parts of the country during the four seasons. He considered that the infectious principle is favored by dampness and heat, and that dryness and cold are inimical to it. This is the reason why elevation is so good for phthisis.

DR. E. O. SHAKESPEARE, of Philadelphia, summed up the proofs in favor of the microörganism of tuberculosis as causing the disease, and criticised Dr. Formad's method of investigation and the precautions he used, thinking that his conclusions were not well founded.

DR. G. C. SMYTHE called attention to the varieties of infectious diseases. The first are purely contagious, as smallpox; the second are infectious not directly, but the germ must come to maturity outside of the body, as in typhoid fever; the third are miasmatic, as malaria. If we assume that all infectious diseases are the result of microörganisms, which act as specific poisons or as carriers, a predisposition on the part of the individual is still necessary. Some families show great susceptibility to certain diseases, *e.g.*, diphtheria. Perhaps tuberculosis might be classified with the local contagious diseases, as syphilis, leprosy, etc., commencing at a certain focus, and thence infecting the whole body. He thought Dr. Formad admitted too much for his own argument.

DR. HAROLD C. ERNST, of Mass., spoke of the various methods of staining the bacillus. He condemned Gibbs's method, and thought Frænkel's only partially satisfactory, but praised Koch's last method, and Ehrlich's.

DR. WILLIAM PEPPER, of Penna., had paid much attention to the literature of the subject, and held his judgment in suspense. In regard to the character of Dr. Formad's address, he was largely responsible for it, as he advised him not to give an account of his recent unpublished experiments. Dr. Pepper wished to lay stress upon the carefulness and conscientiousness of Dr. Formad's work. His personal knowledge of this gave him the right to speak thus in answer to Dr. Formad's criticisers. He was sorry so little original work has been done in this country in this direction. He thought clinical evidence was an important part of the question. His experience had been positively in favor of the non-contagious character of tuberculosis.

DR. TRAILL GREEN, of Penna., spoke strongly in favor of the non-contagious character of phthisis from a clinical experience of half a century.

DR. TILLEY, of Illinois, thought the chemical side of the question had been lost sight of. The chemical character of the soil the bacillus grows on should be carefully studied.

DR. FORMAD thought that Koch had not made out his case fully, and that it brought others into misconceptions to rely upon his statements. He said that he had taken especial pains to avoid error. His animals were better cared for, and in purer air than Koch's. Those animals experimented upon with innocuous substances are taken to the country.

The Section then adjourned.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Sixth Annual Congress, held in New York, May 12, 13, and 14, 1884.

(Specially reported for THE MEDICAL NEWS.)

MONDAY, MAY 12TH—FIRST DAY—MORNING SESSION.

THE PRESIDENT, DR. FRANCKE H. BOSWORTH, of New York, delivered an address of welcome, and afterwards read a paper on

THE CLINICAL SIGNIFICANCE OF FIBRINOUS EXUDATIONS UPON THE MUCOUS MEMBRANE OF THE UPPER AIR-PASSAGES.

Among his conclusions were the following:

That a fibrinous exudation which occurred on the crypts of the follicles of the faucial or pharyngeal tonsil, or of the mucous membrane of the lower pharynx, had no tendency to extend, and belonged to a disease which was self-limited, and not dangerous in its tendencies.

That a fibrinous exudation which occurred upon the surface of the tonsil, or of the mucous membrane of the fauces, constituting a so-called croupous membrane, presented gross appearances, by which it could be immediately recognized.

That croupous membranes on the fauces of an adult marked the existence of a disease which, while being undoubtedly a blood-poison, was still a self-limited infection, and involved no danger to life.

That a croupous membrane forming in the fauces of a child marked the occurrence of the same disease as croupous membrane in an adult; but in the child there was the additional danger of a new centre of development occurring in the larynx, where it might involve the greatest danger to life, though entirely as a mechanical obstruction to respiration.

That a diphtheritic membrane developed in the fauces marked the occurrence of a disease which was dangerous to life, not only from primary and secondary septicæmia, but also from the tendency to the development of the same morbid process in the larynx.

DR. BEVERLY ROBINSON, of New York, took exception to Dr. Bosworth's views in regard to the question of follicular tonsillitis, so called, appearing as an essential fever. From a clinical point of view, he thought that this was a mistake, because, while it was certainly true that in a certain number of instances, particularly in children, the fever lasted for a number of days, and was

evidently connected with the appearance of cheesy masses over the follicles of the tonsils, yet in quite as large a number of cases the fever was of very short duration. Again, the pathological appearances of the exudation from the interior of the follicles did not, he thought, resemble, microscopically, the condition to which Dr. Bosworth alluded in speaking of the true croupous membrane, and did not in reality partake of the nature of an exudation, which was generally regarded as of a fibrinous character. With regard to the question of croupous tonsillitis, he would remark that while there might, perhaps, be many cases in which the membrane itself did characterize the type of a disease which was not a constitutional affection, he had seen cases in which the mucous membrane did not seem to be incorporated with the false membrane itself, and in which the cases seemed to be of mild type, but after a few days became very serious. The membrane, which at first was white and easily detached, afterward became dark and so attached to the underlying tissue that he could not say the case was not one of diphtheria. As regards the origin of these affections in the local absorption of certain germs, he could only say that while they had a theoretical basis, they were, to his mind, far from proved.

DR. WILLIAM C. JARVIS, of New York, said that he could, for the most part, substantiate the views of Dr. Bosworth as regards the gross pathology of the exudation met with in the upper air-passages. His attention was first called to inflammation of the pharyngeal tonsil by the occurrence of the affection in his own person several years before. A feature of acute follicular pharyngitis which did not seem to have received any attention was one in which the secretion was retained; eventually escaping upon rupture of the membrane, and covering the pharynx with a white membrane. Such a change did not occur when the inflamed follicles remained patent.

DR. F. I. KNIGHT, of Boston, wished to call attention to an important practical point which he thought escaped the attention of physicians very generally in these acute affections of the upper air-passages. This was the increased susceptibility to diphtheritic infection during the existence of any simple acute inflammation of the air-passages, and it was a fact which induced him to give a guarded prognosis in even simple, acute affections, such as follicular pharyngitis or ordinary pharyngitis.

The paper was also discussed by Drs. J. N. Mackenzie, J. H. Hartman, and F. Donaldson, of Baltimore; E. L. Shurley, of Detroit; and S. W. Langmaid, of Boston.

DR. BOSWORTH said that he must take exception to Dr. Robinson's statement that follicular tonsillitis, in any sense of the word, was characterized by cheesy deposits in the crypts of the tonsils. The resemblance of the exudation to croupous membrane was sufficiently close to warrant us in the conclusion that the two conditions were very nearly allied, if not identical, the difference being only such as one would expect to find —the membrane in the one case being deposited on the surface, and in the other being confined to the small crypts going to make up the tonsils. The points which he wished distinctly to emphasize were, *first*, that we could, by examination, throw a great deal of light on the clinical tendencies of inflammatory diseases of the fauces (a careful examination leading to a correct diagnosis); and, *second*, that mucous membrane which was in a state of acute catarrhal inflammation offered a favorable nidus for the occurrence of diphtheritic deposit, without there being any necessary connection between the two processes. The catarrhal condition was not the prodromal stage of the disease.

DR. JOHN N. MACKENZIE, of Baltimore, presented

A CONTRIBUTION TO THE STUDY OF CONGENITAL SYPHILIS,

which was, to a considerable extent, based on a case of this disease which had come under his observation. The child remained healthy from the first to the third year, when interstitial keratitis of both eyes (which continued for two years) was the first trouble to become developed. After a time paralysis of both eyelids set in, all muscular control of the lids being lost. Then followed intense occipital cephalalgia, which lasted over a month, when, together with the paralytic trouble in the eyelids, it was completely relieved under medical treatment, the exact nature of which Dr. Mackenzie did not know. Internal strabismus of the right eye next became developed, and this was accompanied with deafness of the right ear, from which there was now a slight purulent discharge. Then came ulceration of the tonsils and pharynx, with dysphagia, complicated by inflammation of the right lachrymal sac and very extensive ulcerations of the hard palate, also with pus and constant muco-purulent discharge. It was not possible to make a laryngoscopic examination, but there was absolute aphonia. The ulcerations advanced, in spite of all treatment, until the child was taken with a mild attack of scarlet fever; when, as a result of this, all the symptoms, including the aphonia, were markedly relieved for a considerable time. The child next had an attack of acute pneumonia, which lasted about four weeks, and when it was examined afterwards, it was found that the hard palate was covered with cicatrices, while the breathing was entirely through the nose.

There were two features about the case to which Dr. Mackenzie wished to direct special attention. The first was that, while deep ulceration of the lower pharynx was not infrequent, such a degree of stenosis as was met with in this patient was exceedingly rare. He knew of but two other cases on record. The second was the paralysis of both upper eyelids. This, he could not doubt, was of cerebral origin, and he thought it was probably due to the presence of a gummatous tumor.

He then referred to a paper of his, published in the *American Journal of the Medical Sciences*, for October, 1880, on "Congenital Syphilis of the Throat," which was based upon th study of one hundred and fifty cases, and stated that the opinions which he had therein expressed, had only been strengthened by the further experience that he had had since its publication, as well as by the observations of others. He believed that laryngeal disease was one of the most constant and characteristic of the pathological phenomena of congenital syphilis, and that one might look for invasion of the larynx with as much confidence in the congenital, as in the acquired form of the disease. There

was every reason to believe that such inflammations had frequently been confounded with simple and fibrinous laryngitis, and their dependence on syphilis overlooked.

The following propositions were then advanced:

First. In congenital syphilis deep ulceration may invade the pharynx and naso-pharynx.

Second. When the eruption of constitutional syphilis is apparently delayed, the pharyngeal and laryngeal affections are apt to be more serious.

Third. Females are attacked more frequently than males. Out of sixty-nine cases of pharyngeal ulceration, forty-one occurred in females.

Fourth. Ulceration may occur in any situation, but its favorite seat is the palate, especially the hard palate, for which it manifests the closest elective affinity.

Fifth. When ulceration occurs at the posterior part of the hard palate, the tendency is to involve the soft palate and velum, and thence to invade the naso-pharynx and posterior nares.

Sixth. The next most common seats of ulceration in their order of frequency, are the fauces, the naso-pharynx, the posterior pharyngeal wall, the nasal fossæ and septum nasi, the tongue and gums.

Seventh. Ulcerations, especially those of the palate, show a tendency to centrality of position, together with a special tendency to caries and necrosis of the bone.

Eighth. The tendency to necrosis exists at all periods of life.

Ninth. While deep pharyngeal ulceration generally precedes or coexists with similar affections of the larynx, the latter occurs also without evidence of pre-existing pharyngeal lesions.

Tenth. Laryngeal ulceration does not commonly follow the pharyngeal destruction of latent syphilis; those palato-pharyngeal ulcerations which are found in tardy congenital syphilis having little tendency to invade the larynx, but rather to infiltration of the naso-pharynx and nose.

Eleventh. Simultaneous or consecutive ulceration of the palate, pharynx, and nose seems to be characteristic of syphilis, or, at least, seems more frequent in this than in any other disease.

The throat ulcerations of congenital syphilis, he continued, showed a tendency to rapid progression which was often beyond control. But they sometimes subsided as if by magic on the appearance of some acute exanthematous disease. It was to this point that he particularly wished to call attention. While congenital syphilis afforded no protection against such affections, it did seem undoubtedly to mitigate the violence of the attack. Thus, scarlet fever, measles, and chicken-pox all seemed, as a rule, to exert a favorable effect on the throat-lesions of congenital syphilis, so that it was probable that the poisons of these diseases were mutually destructive. These remarks were not, however, appropriate to diphtheria, to which the victim of congenital syphilis was apt to succumb rapidly; the presence of the inherited disease greatly increasing the danger from this affection. The remarkable effect of erysipelas on the syphilides had been noted by a number of authors, and some had even proposed inoculation with erysipelatous virus as a therapeutic measure in obstinate cases of syphilis. It seemed, therefore, that there was a well-marked antagonism between congenital syphilis and certain acute exanthematous diseases. In the course of the paper, Dr. Mackenzie stated that there was no difference between the so-called scrofulous and syphilitic ulceration of the throat. Syphilis, tuberculosis, and lupus had been indiscriminately ascribed to scrofula in the matter of such lesions; but apart from these diseases, which were distinct from struma, there was no reason to believe in an ulcerative scrofulide of the throat.

DR. E. L. SHURLEY, of Detroit, could not agree with Dr. Mackenzie in regard to the identity of scrofula and syphilis, and thought that in the present state of our knowledge it was necessary to admit the tubercular, syphilitic, and scrofulous origin of the lesions referred to. While the pathological appearances of the lesions were often much the same in scrofula and syphilis, clinically, he thought, there was a very wide difference in these two diseases, both in children and in adults.

DR. MACKENZIE said, in reply, that Dr. Shurley had very much misunderstood him if he thought he said that scrofula and syphilis were the same. The idea that he intended to convey was, that there was no point of difference between the so-called scrofulous throat ulceration of the French writers, and that of congenital syphilis. Neither was there any difference between such scrofulous ulceration of the throat and that due to tuberculosis or lupus.

DR. HARTMAN related the case of a child, four years of age, suffering from congenital syphilis, who had an attack of measles, by which the ulceration existing in the naso-pharynx, so far from being alleviated, was considerably aggravated. After it had recovered from the measles, consequently, the throat was left in a worse condition than before the attack. This, of course, was only a single case; but it went to show that such cases were not always benefited or controlled by the intercurrence of an acute exanthematous disease.

DR. DONALDSON remarked that he had understood the author of the paper to question the existence of scrofulous ulceration of the throat in young children not connected with congenital syphilis. He then related a case now under his care, a child of five years of age, the son of a healthy farmer, who had, with a large ulcer of a scrofulous character over the soft palate, unmistakable evidences, such as enlargement of the lymphatic glands, etc., of scrofula, and none of the usual symptoms of congenital syphilis.

DR. KNIGHT said that his experience in this class of cases was very limited, but he believed, with Dr. Mackenzie, that a careful search for the origin of the trouble present would reveal the history or certain evidences of syphilis, and, if not of that, of tubercle. As in the adult, we could not always, perhaps, get a satisfactory syphilitic history, but antisyphilitic treatment generally yielded such results as to justify us in considering the disease to be of a syphilitic nature.

DR. BOSWORTH remarked that the more experience he had in the matter, the more convinced did he become that, as far as the mucous membrane of the air-passages was concerned, there was no difference between the ulceration of congenital syphilis and scrofulous ulceration. He said that he would have been glad if Dr. Mackenzie had directed some attention to the question of treatment. In his own practice (so far had

he become convinced of the identity of the two conditions), he had of late years depended almost entirely upon the administration of mercurials, and in many cases the results had been eminently satisfactory. This seemed to him additional proof of their identity.

DR. MACKENZIE, in closing the discussion, said that he had especially avoided generalization in his paper, and had only stated that, in his experience in this class of cases, the ulceration was often cured or relieved by an acute intercurrent disease. In Dr. Donaldson's case, he did not see how a diagnosis was to be made between syphilis and scrofula, and Dr. Knight had pointed out how difficult it often was to get at the facts of a syphilitic history. With regard to treatment, he was in the habit of relying upon mercurials and the iodide of potassium, using iodoform locally.

APPOINTMENT OF COMMITTEES.

Before adjournment, the Chair appointed on the *Nominating Committee*, Drs. Knight, Lefferts, and J. Solis Cohen; and on the *Auditing Committee*, Drs. Mackenzie and Hooper.

ELECTION OF NEW FELLOWS.

Drs. S. Solis Cohen, of Philadelphia, and Clarence C. Rice, of New York, recommended for membership by the Council, were then duly elected Fellows.

AFTERNOON SESSION.

DR. J. O. ROE, of Rochester, N. Y., read a paper on

RETROPHARYNGEAL ABSCESS.

Having alluded to the location of abscesses in general, he said that the post-pharyngeal connective tissue was liable to this affection, first, on account of its low vitality; and, secondly, on account of its looseness. Retropharyngeal abscess might originate either in the soft tissues, or from necrosis of the cervical vertebræ, and the former variety might have its origin either in the glandular structure or in the areolar cellular tissue. Having given a sketch of the anatomy of the parts, and especially their glandular connection, he mentioned the causes of retropharyngeal abscess as being either (1) idiopathic, (2) traumatic, or (3) secondary. Among the first were included cold, nasal catarrh, retropharyngeal lymphadenitis, and the scrofulous, tubercular, and syphilitic diatheses. Traumatic abscesses were such as were caused by direct wounds, or by injury from the swallowing of bones, and other similar accidents. Those of secondary origin were such as were dependent on tonsillitis, pharyngitis, or other local affection in the vicinity.

Among the symptoms were mentioned dysphagia and dyspnœa, and the latter might be so urgent as to necessitate tracheotomy if the true nature of the trouble was not recognized. Convulsions were sometimes caused by it in children. Among the other symptoms mentioned as liable to occur were facial paralysis, soreness about the palate, stiffness and swelling of the neck (the head being often bent to one side, if the abscess were laterally situated), and œdema of the larynx, which sometimes caused sudden death. In the diagnosis of this affection, it was necessary to differentiate it from croup, the presence of foreign bodies in the throat, œdema of the larynx, and even enlarged tonsils. The voice was always more or less altered, and in children it might be altogether extinguished. A correct diagnosis could only be arrived at by careful inspection and digital examination. Lipoma of the pharynx had sometimes been mistaken for retropharyngeal abscess, and in one case, in his own practice, the diagnosis of the former had to be established by an exploratory incision. When there was much dyspnœa, the head was usually bent backward considerably. The prognosis was least fatal in the idiopathic variety, much more so in the secondary.

The only treatment for retropharyngeal abscess was prompt evacuation. There was some danger of sepsis supervening, and, therefore, it had been recommended, by some, that a canula should be employed to remove the pus. Dr. Roe thought it well, in some cases, to make quite a small incision at first, as advocated by Allis, for fear of some of the contents of the abscess getting into the larynx, and afterwards enlarging it so as to insure complete maceration of the sac.

Having mentioned that the disease was practically one of infancy, fully one-half the cases occurring in the first year of life, he related three cases which he had been called to see in consultation. The first was in an infant, nine months old, who was supposed to be suffering from diphtheretic croup. There was, however, an entire absence of the constitutional disturbance characterizing this affection, and a careful examination soon revealed the true state of affairs. In this instance there was marked swelling of the neck, extending from the clavicle to the ear, on the left side. He made a small incision at first, so as to allow the pus to escape slowly, and at the same time bent the head forwards; later making the incision larger. There was no return of the trouble, although the child had been weak and cachectic from birth.

The second patient was ten months old, and had had an attack of scarlatina two weeks before the occurrence of the retropharyngeal abscess. There was still remaining considerable coryza and conjunctivitis. One evening it was noticed that there was considerable difficulty in breathing and in swallowing, and that the voice was markedly altered. The attending physician feared that diphtheria was setting in, but the presence of the abscess was recognized by Dr. Roe, who made an incision in the same manner as in the preceding case, after which there was no further trouble.

The third case occurred in a student, twenty years of age, who, after attending a class supper, suffered from headache, diarrhœa, and sore throat. The neck was considerably swollen, and Dr. Roe found that there was a retropharyngeal abscess. This was freely opened, but the pus burrowed downwards in the tissues, so that the abscess became retro-œsophageal. There was a very profuse discharge, and the inspiration sounded as if the patient was breathing through soap-bubbles. He died from exhaustion on the third day.

DR. T. A. DE BLOIS, of Boston, said that he also had had three cases of retropharyngeal abscess. What had impressed him most in connection with all of them, was that the head was carried very far backward, so that this of itself made the diagnosis an easy one, and he thought that Dr. Roe had hardly laid sufficient stress upon this point. One of the cases was in an adult, and the other two in children; and in one the

incision had to be carried through the posterior pillars of the fauces. He did not agree with Dr. Roe in regard to the small incision, but thought that it should be free, and the pus at once evacuated; though after the incision the head should be forced down.

DR. S. JOHNSTON, of Baltimore, wished to call special attention to the advantages of the free horizontal incision in retropharyngeal ulcers. In the case of a child he had made this, and then inverted the patient; at the same time carrying his finger into the throat. The result was the complete and satisfactory evacuation of the abscess; nearly a wine-glassful of pus escaping.

DR. W. C. JARVIS, of N. Y., thought that more stress should be laid upon the occasional occurrence of retropharyngeal abscess in connection with ordinary phlegmonous tonsillitis. A case of this kind had come under his observation, in which this condition existed, along with acute suppuration of the tonsil, and almost resulting in the strangulation of the patient.

DR. GEORGE M. LEFFERTS, of New York, said that one clinical fact, well observed, was worth pages of theory. Who of those present, he asked, believed that nasal catarrh in children was even a cause of retropharyngeal abscess? Or, if it was, why was the latter not oftener met with? Having expressed doubt as to tuberculosis of the pharynx (in itself so extremely rare that some denied its occurrence altogether) or injury to the posterior pharyngeal wall ever being causes of this trouble, he went on to say that retropharyngeal abscess, apart from that form arising from caries of the vertebræ, was probably due to a simple phlegmonous inflammation of the cellular tissues in front of the spinal column. As to the matter of diagnosis, it seemed to him that there was little value in speculating whether the patient's head was held forwards or backwards, whether inspiration or expiration was most affected, and the like variety of symptoms that had been alluded to. One look into the patient's throat was sufficient. Few conditions could be confounded with retropharyngeal abscess; a suppurating gumma was one. In treatment, again, why not sum up the matter in one word by saying that retropharyngeal abscess must be treated upon the same surgical principles as an abscess elsewhere in the body—open it and discharge its contents? The affection, he thought, must be very rare. In literature comparatively few examples were met with, and in all his experience he had seen but two examples. Both were in young children, and both were operated upon by simple incision. There was no difficulty in the diagnosis, and both recovered.

DR. J. SOLIS COHEN remarked that the danger of suffocating the patient on incision of the abscess might be avoided by operating with the head pendent. As to the horizontal incision recommended by one of the speakers, he believed that the danger of leaving a pocket in the lower portion of the abscess, in which pus might accumulate, had been mentioned by some authors as a reason for prefering the vertical incision.

Remarks were also made by Drs. Donaldson, Major, Lincoln, Mackenzie, Ingals, and Chamberlain, and the discussion was brought to a close by Dr. Roe.

CONGENITAL WEB OF THE VOCAL BANDS

was the title of a paper read by DR. T. A. DE BLOIS, of Boston. The patient was a young woman twenty years of age, whose voice had always been weak and puerile. She was first under the charge of his colleague, Dr. Fowler, and afterwards came under his own care. She had a very dependent epiglottis, and on account of the extreme irritability of the parts it was very difficult to get any view of the larynx for a long time. When the intolerance had been partially overcome by a course of education, it was found that over the anterior half of each vocal band there was spread a strong white web, the appearance of which was shown in colored drawings exhibited by Dr. De Blois. He determined to break up the adhesions, if possible, and so introduced Mackenzie's forceps for the purpose. Instead of tearing the web, however, the instrument merely scratched it; but in a subsequent attempt he succeeded in splitting it across by the same means, leaving a jagged, dentated edge on each side. The next day he found, to his chagrin, that the torn surfaces had again united; but he afterwards ripped up the new cicatricial tissue with a probe. The treatment of expansion had been continued by Dr. Fowler, and the voice had become natural in tone; while the singing voice had gained three notes upwards and four downwards. The bibliography of this condition was very meagre, and, so far as he knew, there were but three cases on record. These he then gave.

DR. M. J. ASCH, of New York, said that pertinent to the case of Dr. De Blois was a case he himself had had, in which he found a web occupying the anterior portion of the glottis, the result of acute inflammation. There was also a vertical web in one eye, stretching from the palpebral to the orbital conjunctiva. There was originally no laryngeal trouble, but the patient eventually became the subject of laryngeal phthisis.

DR. HARTMAN questioned the advisability of the introduction and forcible expansion of a pair of lateral forceps in the larynx, and said he would prefer the curved or tube bistoury, or the galvano-cautery, for division of webs.

DR. WM. H. DALY, of Pittsburg, read a paper on

GUNSHOT WOUND OF THE LARYNX, INVOLVING THE VOCAL BANDS.

In connection with a case which he related, he gave complete statistics and a bibliography of this injury. He had expected to present the patient, but the latter had found it impossible to attend.

DR. J. SOLIS COHEN stated that having had recent occasion to study the subject of gunshot wounds of the larynx, he had been astonished to find how infrequent they had been in military practice. He had had the opportunity of examining Dr. Daly's patient, and had at that time doubted if the ball had really traversed the larynx; but in view of the subsequent history of the case, he could not but admit that his previous opinion had been an incorrect one.

DR. LEFFERTS said that a specimen of gunshot wound of the larynx was in his collection in the museum of the College of Physicians and Surgeons, but, unfortunately, without history. The presence of a tracheotomy wound showed that the ball had remained in the larynx, and necessitated tracheotomy for dyspnœa.

DR. ASCH remarked that gunshot wounds of the larynx were extremely rare. As a medical officer of the United States Army for twelve years, and Acting

Medical Inspector of the Army of the Potomac during the Wilderness campaign of 1864, he saw not a single case of this character.

DR. J. SOLIS COHEN, of Philadelphia, reported

A CASE OF COMPLETE PARALYSIS OF THE LEFT VOCAL BAND IN EXTREME ABDUCTION, THE RESULT OF AN INCISED WOUND OF THE NECK.

The patient was thirty-three years of age, a drug-clerk, and a slave of the opium-habit. He was seen at the Jefferson Medical College, Philadelphia, in November, 1883, and said that in the June previous he had had his throat cut by thieves near Omaha. In attempting to cry out his voice gave way, and ever since there had been complete aphonia. While the right vocal band was normal in position, the left was found fixed in extreme abduction. On forced inspiration the right band did not go quite as far over as the position in which the left constantly remained. The man's account of himself was believed to be utterly unreliable, and there could be no doubt, from the position of the cicatrix in the neck (a plaster cast of which was exhibited), that he had attempted to commit suicide. The sterno-cleido-mastoid muscle had been severed, and the wound was deepest directly in the track of the pneumogastric nerve. There was no pulsation in the carotid artery, which was probably due to the fact that it was tied by the surgeon called to attend the man after the receipt of the injury. The wound was made from behind forwards, and there was a gashed appearance about the cicatrix, as though several slighter cuts had been made before the main one. The case, he believed, was altogether unique. Colored drawings were exhibited, showing the position of the vocal bands in inspiration, expiration, and forced inspiration.

DR. BOSWORTH remarked that he thought that this was the first case yet reported which would throw light on the subject of true abductor paralysis of the vocal bands, and the case was discussed by a number of other Fellows.

In the evening THE PRESIDENT, DR. BOSWORTH, gave a

RECEPTION

at his residence to the Fellows.

TUESDAY, MAY 13TH, SECOND DAY.

MORNING SESSION.

DR. F. H. HOOPER, of Boston, reported

A RARE FORM OF TUMOR (CAVERNOUS PAPILLOMA) OF THE VOCAL BAND.

The case was seen by Dr. Knight on November 22, 1882, but at that time refused all operative interference. The following year the case was referred to Dr. Hooper. The patient was a clergyman, thirty-two years of age, and said that the trouble commenced in September, 1882, when he suffered from a cold, with hoarseness. The cold lasted about three weeks, but the hoarseness continued persistently up to the time that the case came under observation. Apart from the hoarseness, there was no symptoms referable to the larynx, except a more or less constant scraping of the throat. A laryngoscopic examination revealed the presence of a small, nodular, sessile growth on the anterior portion of the left vocal band, about the size of a No. 7 shot. It presented some of the characteristics of a cystic tumor, but the diagnosis could not be determined with accuracy on inspection. At the patient's second visit, Fauvel's forceps were introduced, more for the purpose of testing the tolerance of the larynx than with any idea of removing the growth; but when the instrument was withdrawn and placed in a glass of water, much to Dr. Hooper's surprise, the tumor was found to have come along with it. It had been thus easily knocked off by the blade of the forceps, and had fortunately remained adhered to it. The hemorrhage was quite insignificant. The tumor (drawings of the microscopical sections of which were presented for examination) was referred to Dr. W. W. Gannett, Pathologist to the Massachusetts General Hospital, for examination, and he expressed the opinion that it was a cavernous papilloma. It contained a cavity which was filled with red blood-corpuscles, and he stated that he thought it had consisted of cavernous tissue from the start. The patient's voice was at once completely restored, and he left town for his place of residence the day following the removal of the growth.

Since then there had been no return of the trouble, and he had recently written Dr. Hooper that, during a series of special meetings lasting six weeks, he had spoken almost every night, and that his voice was "as good as ever." The only case of similar character that had as yet been reported, as far as the author was aware, was one described by Fauvel.

DR. CARL SEILER, of Philadelphia, stated that he also had had a case very similar to that of Dr. Hooper, with the exception that in his the epithelial structure was not as far developed as in the latter, the tumor being more of an angioma. The patient in whom it occurred was a student of elocution, and the only symptom of which he complained was hoarseness.

DR. MORRIS J. ASCH, of New York, reported

A CASE OF ENCHONDROSIS OF THE LARYNX.

Having stated that cartilaginous tumors of the larynx were very rare, he gave a complete *résumé* of the literature of the subject. There were only two cases, he said, in which the true character of the growth was recognized, and in but one of these was endolaryngeal methods of treatment employed. Dr. Asch's patient was forty-two years of age. He suffered from constant irritation of the throat, attended with hoarseness. He was an amateur vocalist, and the trouble in the larynx was a continual source of annoyance. The tumor was situated in the left aryteno-epiglottidean fold, and, on account of its marked hardness, Dr. Asch was enabled to make a correct diagnosis before its removal. This was accomplished by means of a modification of Stœrck's guillotine, in which the ring was made of well-tempered steel, with the cutting edges on the upper border. It was very difficult to get the tumor surrounded by the ring; but when this was finally accomplished the growth was removed without difficulty, and there was no hemorrhage. The restoration of the voice was complete, and the patient found that two notes were actually added to his register. The specimen was submitted for microscopic examination to Dr. George L. Peabody, Pathologist to the New York Hospital, who reported that each section of the tumor showed cartilage at the centre, and that it contained carbonate of

lime in considerable quantities. It was, therefore, a cartilaginous growth undergoing calcareous degeneration. He considered the case of interest to laryngologists, then, not only for the diagnosis, which showed it to be a very rare condition, but also from the fact that a cure had been effected by endolaryngeal methods.

DR. J. SOLIS COHEN said that he had never met with a case of this character in his own practice. In one or two instances he had thought he had to deal with cartilaginous growths of the larynx, but found subsequently that they were fibroids. He could hardly understand why the marked increase in the vocal register had followed the removal of the tumor, since the latter was situated outside of the vocal tract.

DR. SEILER thought it was perhaps due to increased resonance depending on the moral effect upon the patient from a sense of relief about the vocal apparatus.

DR. LANGMAID expressed the opinion that the increase in the voice was probably due, first, to the removal of irritation, and, second, to the feeling of enthusiasm on the part of the patient; and Dr. Asch agreed with him in this explanation.

DR. W. C. JARVIS, of New York, read a paper on

A NEW METHOD FOR THE REMOVAL OF LARYNGEAL GROWTHS.

In commencing, he said that the procedure to which he wished to direct attention on this occasion was the use of chromic acid for the removal of laryngeal papillomata. It was his practice to employ crystals of the acid fused on the point of a probe. The usefulness of this method depended on the affinity of this salt, which was properly the trioxide of chromium, for soft papillomatous tissues. The advantage of its action was that it was self-limited, and thus, as an escharotic, this agent was safe, harmless, and yet sufficient. It had a very restricted action on normal mucous membrane, and this added safety as a caustic agent.

There was a pronounced opinion in the minds of laryngologists, he continued, against the use of chromic acid, and he quoted a passage from Morell Mackenzie in opposition to its use. The reason for this unfavorable opinion, he thought, was on account of its improper employment on the part of certain operators, who had used it in such large quantities as to make its application both painful and dangerous. When properly employed, however, as he had found by experience, the salt, in the first place, enucleated the laryngeal growth, and, secondly, prevented the return of the neoplasm. One serious objection to the nitrate o silver was the tendency of its action on the tissues to spread; but the most important difference between chromic acid and the latter was its deliquescent character. The nitrate of silver, on the other hand, was wholly insoluble.

The great points in the successful use of chromic acid in this connection were tha it should be applied in small quantity, and the application frequently repeated. In making the application it was advisable to keep the point of the probe in the field of the laryngeal mirror, so that it could be directed with precision. The probe having been heated, a small quantity of the acid was placed upon it, and the papillomatous tissue was removed piecemeal. The curve of the probe, he thought, had much to do with the success of the procedure. As the use of the uncovered probe was sometimes attended with more or less difficulty, he had devised a canula provided with a spring, which was controlled by a trigger (instrument exhibited). The advantages of this were, first, that it prevented the chromic acid from coming in contact with the tissues before reaching the seat of growth; and, second, that it enabled the operator to surprise the larynx. It was so arranged that the force of the spring could be exactly regulated, and forcible impact of the caustic avoided.

The general applicability and utility of this method he thought very wide He then gave a history of the case in which he had first been led to adopt the treatment. The patient was a lady, thirty years of age, who was sent to him from Norwalk, Conn. She was suffering from more or less dyspnœa and frequently recurring spasm of the larynx. Her voice was a discordant whisper, and the laryngoscope revealed a very large growth, almost entirely filling the laryngeal cavity. By way of testing the tolerance of the parts, he introduced a probe, but it gave rise to such intense spasm that the patient's life seemed endangered. He proposed to perform tracheotomy, but as the patient would not entertain the thought of this, he determined to try the effect of applications of chromic acid. Accordingly, he resorted to this procedure, and was gratified to find that the caustic application produced neither spasm nor cough. He then applied the acid every day, and sometimes two or three times at a sitting, and at the end of nine days the patient recovered her natural voice. This was really as the result of five days' treatment, since during four of the nine days circumstances prevented the patient from attending. The treatment was commenced on the 14th of February, and was continued until the 4th of March; by which time every vestige of the tumor had disappeared, and he regretted very much that she was not present to show the result. (Dr. Jarvis exhibited large colored drawings of the growth.) He did not wish to exclude the use of the forceps and the snare, but at the same time he claimed that the opprobrium which had been cast upon chromic acid was unjust and unfounded.

In conclusion, he summed up the contents of the paper in the following propositions:

1. Trioxide of chromium, or chromic acid, is self-limited in its action. 2. It offers a safe and reliable means for the removal of large and small soft laryngeal growths. 3. It not only removes such growths, but also serves to prevent their return. 4. It is best applied fused on the point of a probe. 5. A tubular instrument can be employed to protect the tissues and guide the application. 6. Its use is not necessarily attended with pain and spasm. 7. It offers a substitute for tracheotomy and thyrotomy in certain cases in which these measures are ordinarily judged necessary.

DR. J. SOLIS COHEN said that it had been so long since he had used caustics for the removal of such growths from the larynx, that he had almost forgotten that he had ever done so. In such cases he had usually operated with instruments, but had sometimes applied escharotics afterward. He was glad that Dr. Jarvis had given such detailed directions for making the applications of chromic acid, as everything depended on the way in which the procedure was carried out. The results seemed to him very remarkable, and

he did not know of any other means which would have eradicated so large a growth as that described by Dr. Jarvis, in such a short time.

DR. ROE had sometimes employed chromic acid, but not until after the use of instruments. In one case of aphonia, of about eight years' standing, occurring in a patient eighteen years old at the time of coming under observation, he found a papilloma almost as large as the one described by Dr. Jarvis. He removed the growth by instruments, and then applied bichromic acid, for which he used a device somewhat similar to Dr. Jarvis's, in which the applicator was hid in a sheath. In several other cases he removed little nodules, and touched the bases with bichromic acid.

DR. SEILER said that he also had been using an instrument very similar to Dr. Jarvis's for surprising the larynx. It was provided with a pistol trigger, and its action was perhaps not as neat as that of the one now exhibited.

DR. INGALS, of Chicago, said that he sometimes resorted to a simple device for making a caustic applicator that was sufficiently protected for all practical purposes, and that was to take a piece of aluminium wire, and slip a piece of rubber tubbing, such as dentists use over its end. To make applications in certain positions it was sometimes advisable to cut out a piece of the rubber tubing at one side. He had used other caustics, but not chromic acid, in papillomatous growths. In one case of adenoid cancer, however, he was employing it freely, and without any bad results.

DR. MAJOR, of Montreal, said that in the case of infants and young children, he had found the use of absolute alcohol, applied by means of a spray, of very great advantage. While it would not perhaps remove large growths of the larynx, it would cause such shrinkage in them that tracheotomy could be dispensed with, and the patient got along comfortably until sufficiently large to have an operation performed for their removal, whether by caustic or otherwise.

DR. JARVIS said, in closing the discussion, that in many cases in which the size and position of the growth were such as to produce intense spasm, instrumental interference was out of the question, on account of the danger of bringing on a fatal result; but when the growth was not sufficiently large to cause reflex spasm, instruments could be used with impunity, whether a certain amount of irritative spasm be produced or not.

THE PRESENTATION OF INSTRUMENTS

being now in order, among those exhibited were a nasal speculum, by Dr. Mackenzie; a tonsillitome, with three blades, and a new uvulatome, by Dr. S. Solis Cohen; and an apparatus for artificial feeding, by Dr. Delavan.

SECOND DAY—AFTERNOON SESSION.

THE PROPOSED NEW NOMENCLATURE

was in order for discussion, but, on motion of Dr. Knight, of Boston, the matter was referred to the Council for consideration, after which it was to be reported for adoption.

DR. D. BRYSON DELAVAN, of New York, then read a paper on

PERMANENT UNILATERAL PARALYSIS OF LARYNGEAL ABDUCTORS, FOLLOWING CEREBRAL HEMORRHAGE; UNIQUE CASE.

The case was one which, he thought, would be of interest to the Association, not only on account of its extreme rarity, but also as affording an opportunity for the discussion of the vexed and unsettled question of the etiology of abductor paralysis. The only distinct reference to this lesion which he had been able to find in the whole range of medical literature, was in Nothnagel's article on cerebral hemorrhage in *Ziemssen's Cyclopædia*, in which he simply says that unilateral paralyses of the vocal ends are exceedingly rare. The patient who was the subject of the affection was a gentleman sixty-nine years of age, who belonged to a long-lived family, in which there were, however, some tubercular and rheumatic tendencies. He was of temperate habits, but used tobacco freely. Since middle life he had suffered more or less constantly from rheumatism, and he was also troubled at times with pharyngeal catarrh. In 1876 he had a seizure which was apparently of a vertiginous nature, from which he recovered promptly, without any bad consequences; but in 1877 he had a well-marked apoplectic stroke. This was followed by complete hemiplegia, and, in addition to this, his voice assumed a cracked, piping, and uncertain tone. There was also facial paralysis, with distinct ptosis. For several months there was a slow but steady improvement, until all trouble disappeared, except that in connection with the voice, which remained practically the same.

In 1882, Dr. Delavan first had an opportunity of making a laryngoscopic examination, and he found that there was complete paralysis of the right laryngeal abductors, the vocal band of that side lying directly in the median line. This condition had now lasted for seven years. From the paralysis of the laryngeal abductors occurring at the same time and apparently in connection with hemiplegia, the result of cerebral hemorrhage, it would seem at first sight to establish the existence of independent ganglionic centres for the abductors; but the fact that all the other paralyses disappeared after a time, while this abductor paralysis remained permanent, certainly militated against such a hypothesis, though it did not positively exclude it.

DR. KNIGHT considered this matter of abductor paralysis a subject of interest, but doubted whether any of those present were prepared to add anything new in regard to it. He had, however, seen one case which seemed very pertinent to the paper. It was that of a patient who fell down stairs, striking his head, and whose voice was at once found to have become entirely altered in tone. This was the only trouble from which he suffered, and the examination of the larynx showed paralysis of the abductors. There must, therefore, have been some lesion which affected the abductors without implicating the adductors,—probably an injury to either the nerve or the nerve-centre.

DR. DELAVAN remarked, in conclusion, that he had simply offered a clinical fact, which he trusted might add a mite to our knowledge on this obscure question, and that he had no theory of his own to advance.

DR. R. P. LINCOLN, of New York, reported a case of

STRICTURE OF THE ŒSOPHAGUS.

The patient was a native of Hayti, fifty years of age,

and was referred to him by Dr. F. N. Otis, in June, 1883, when he was suffering from aphonia, dyspnœa, dysphagia, regurgitation of food into the nares, and more or less constant pain. These troubles had commenced, he said, eighteen months previously.

An examination showed him to be suffering from rhinitis, pharyngitis, and laryngitis, and he said that he had been previously treated for syphilitic laryngitis by the internal administration of iodide of potassium and locally by the application of nitrate of silver, tannin, etc. Inspection showed a general fulness of the neck, extending from the cricoid cartilage down to the clavicle; while the thyroid body was considerably enlarged. The epiglottis was red and thickened, and there was stenosis of the larynx. There was extreme sensitiveness of the pharynx and larynx, and no attempt was made at this time to pass sounds into the œsophagus. The presence of a stricture of the latter was indicated opposite the seventh cervical and first dorsal vertebræ on auscultation when the patient swallowed fluid. He was placed on the use of iodide of potassium, while oleate of mercury was rubbed into the enlarged cervical glands, which became softened and less sensitive, though they did not diminish in size. At the same time local applications were made, by means of spray, to the pharynx and larynx, and his whole condition became considerably improved. Afterwards, however, he grew worse, and the skin was noticed to be somewhat cyanosed, while he also suffered from delusions.

Under the use of steam inhalations and hypodermic injections of morphia, he again improved, though the obstruction to deglutition still continued. The attempt to pass sounds or bougies was always followed by inflammation; but once Dr. Lincoln succeeded in introducing a metallic sound. Severe inflammation followed, but later, Dr. Weir passed a bulb-pointed catheter without occasioning any inflammatory trouble. For a time, he seemed considerably relieved, receiving three nutrient enemata a day, in addition to hypodermic injections of cod-liver oil; but in September he died. The autopsy showed that the disease was medullary cancer. It began in the anterior wall of the œsophagus, and the cervical glands, as was usual in such instances, shared in the affection. The vagi nerves were implicated, and death resulted from interference with the cardiac branches of the same.

Dr. Roe suggested that the bougies should have been left *in situ*.

Dr. Daly thought that gastrostomy migh have been tried.

Dr. Donaldson stated that he could not think it necessary to resort to gastrostomy in cases of stricture of the œsophagus from adhesive inflammation resulting from caustic fluids, as had been recommended by some. He related a case occurring in a child two years of age, who swallowed concentrated lye; when in two weeks it was found that there were two strictures of the œsophagus, one about the seventh cervical vertebra, and the other near the cardiac orifice of the stomach. Soft œsophageal bougies were introduced more or less continuously for over two years; the tube being thereby kept open. Should he have another similar case, he would keep the œsophagus open by allowing a perforated tube to remain in it, as had been done by others.

Dr. Lincoln closed the discussion, and said, in reply to Dr. Roe's criticism, that it should be borne in mind that any attempt at interference with the œsophagus, at least any sufficient to pass a sound, was always followed by great inflammatory reaction. Moreover, there was a prompt improvement, attributable, apparently, to the soothing treatment at first instituted, which seemed to justify its continuance. In regard to Dr. Daly's suggestion, that gastrostomy might have been tried, he wished to say that while the statistics of operations so far reported gave but little encouragement for its adoption in any case, certainly the sequel in this instance showed that it would have been useless; the cause of death having been pointed out to have been due to implication by the disease of the cardiac branches of the vagus.

Dr. E. Fletcher Ingals, of Chicago, read a paper on

TRACHEAL STENOSIS.

During the past year he had met with three cases of this affection (all due to syphilis), which he related in detail. The first patient, after making a fair amount of improvement, died, his decease being attributed, to asthma. In this case, Dr. Ingals said, life was undoubtedly prolonged for many months by the use of large doses of iodide of potassium, which he recommended very highly in this kind of trouble. In the second case this acted so favorably that there had been no return of the severe symptoms, which were at no time urgent, and the patient was able to attend to business regularly. In the third case it was necessary to perform tracheotomy.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—E. L. Shurley, M.D., of Detroit.

Vice-Presidents.—Drs. J. H. Hartman, of Baltimore, and Wm. H. Daly, of Pittsburg.

Secretary and Treasurer.—Dr. D. Bryson Delavan, of New York.

Librarian.—Dr. T. R. French, of Brooklyn.

Council.—Drs. F. Donaldson, of Baltimore, and F. H. Bosworth, of New York.

THE ANNUAL DINNER

of the Association was given at the University Club.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Thirty-fifth Annual Session, held at Philadelphia, May, 14, 15, and 16, 1884.

The Society was called to order in the Hall of the Union League by The President, Dr. Henry H. Smith, of Philadelphia.

The register of delegates, numbering two hundred and fifty, was accepted without being read.

THE ADDRESS OF WELCOME

was then delivered by Dr. J. B. Roberts, Chairman of the Committee of Arrangements, who, on behalf of the Philadelphia County Medical Society, extended a cordial greeting.

The President then introduced the Governor of Pennsylvania, Hon. Robert E. Pattison, who in a few remarks said that Pennsylvania derives exceptional honor from the character and reputation of her medical profession. Its ranks are full of great names and its history with great achievements. You have wisely chosen

Philadelphia as a meeting-place, and while here, your Society may be regarded as set upon a hill. It should be remembered that it was here that the first system of medical study was formulated in this country, and from this has sprung the present University of Pennsylvania. Philadelphia may be regarded as the Odessa of medicine; she has sent forth many great men, among them one whose death I greatly deplore, a man honored by Oxford and Cambridge, Prof. S. D. Gross, by whose death the medical fraternity has suffered a great loss. The history of medicine is the history of the human race, and its progress is reflected as man progresses from idolatry to enlightenment. There is no other profession that demands of its members, so urgently and pressingly, that its members shall be distinguished by great learning, devoted sincerity, and spotless honor as this. I hope, for the sake of this Commonwealth, that the results of this session may be to the advantage of the medical profession in Pennsylvania.

THE COMMITTEE ON PUBLICATION

presented the following:

Resolved, That in future no paper read before the Pennsylvania State Medical Society shall be printed in the *Transactions* if they have been published elsewhere, unless such previous publication shall have been simply in abstract.

The resolution was referred to a special committee, with instructions to report the following day. Drs. Traill Green, Stewart, Wood, of Allegheny, Allis, and Purcell were appointed the committee.

THE MEDICAL EXAMINERS OF COUNTY SOCIETIES

reported that twenty men had applied for examination; of these thirteen passed and seven were rejected.

THE REPORT OF THE COMMITTEE ON THE APPEAL OF THE AMERICAN ANTI-VIVISECTION SOCIETY

was presented by Dr. S. Weir Mitchell, Chairman. It recited the bad effects in England of the interference of a similar society there in securing legislation hostile to original investigation. The operation of the English law has put an end to physical research. One eminent physician who has been investigating snake poisons has been obliged to give up his inquiries, and this in face of the fact that from 25,000 to 30,000 people are killed in India every year by snake bites, and the Indian Government has actually sent snake poison to Philadelphia, and money, also, to secure investigation, not being able to have such researches made in England. In the latter country, of forty-seven eminent and skilled men who were asked as to the value of vivisection, forty-five answered in favor of it, and only two against it, and in a convention in London in 1881, twenty-four hundred of the most learned physicians pronounced that experimentation upon living animals was indispensable to the future progress of medicine, and it was not desirable to restrict such experiments. It told the members that efforts will be made in the Legislature to pass an anti-vivisection law, and each of them ought to see that such a bill is defeated, and not have our great medical schools crippled, as they have been in England. In Washington, recently, at the American Medical Association, a unanimous vote was recorded against restriction. The report recommended the adoption of the following resolution:

Resolved, That in view of the attempts which have been or may be made to obstruct, by restrictive legislation, the progress of experimental medicine, this Society desires to express its earnest conviction that experimentation on animals is a most useful source of knowledge in medical science; that it is the means by which many important discoveries, both practical and scientific, have been accomplished; that its direction and supervision can be properly entrusted only to members of the medical profession, and that its restriction or prohibition by law would inevitably retard the acquisition of knowledge in respect to healthy and morbid actions, the causes and prevention of disease, and the improvement of the medical art.

The report was adopted unanimously and the Committee continued, to urge the views of the Society on the Legislature.

The amendment to By-laws, Article V., offered by Dr. Henry Leffmann, on behalf of the Philadelphia County Medical Society: Add as Section 8: "No paper shall be read before this Society unless the same has been previously read, either in full or in abstract, before a County Society, and by it referred to this Society," was indefinitely postponed.

MISCELLANEOUS BUSINESS.

A resolution was adopted recommending the passage of a law preventing the adulteration of drugs and medicinal preparations, as recommended by the Pennsylvania Pharmaceutical Association.

A resolution to appoint a committee to take action in regard to legislation looking to the regulation of the sale of alcohol was lost.

AFTERNOON SESSION.

THE ADDRESS IN HYGIENE AND STATE MEDICINE

was delivered by Dr. Benjamin Lee, of Philadelphia. He took for his subject, *The Present Outcome of Sanitary Agitation in Large Cities in the United States.*

In no department of governmental supervision do the United States of America make so poor a showing, as in that of the care of the public health. With limited areas and in small communities, much may be accomplished by private effort, and this fact hygienists have not been slow to appreciate. A go-between was needed to interpre their teachings to the masses, and impress upon them their importance. This agency has developed itself in voluntary sanitary associations, modelled upon one started in the ancient and filthy city of Edinburgh. The first in this country was started in Newport, Rhode Island. This was followed by a second in Lynn, Mass., and a third in Orange, N. J., then in rapid succession by others in other cities and villages, until now there are not less than a hundred and seventy in active and beneficent operation throughout the country, that of Brooklyn, L. I., being the largest and most important. The objects of these associations are, first, self-protective, by indicating, as far as may be, sanitary defects and dangers in the homes of their members, and of neighbors of their members, suggesting remedies for such defects, and urging their application; and secondly, educational, (*a*) in the most practical way by actual demonstration of the necessity for, and the benefits of, sanitary science, as above stated, and (*b*) by the dissemination of popular tracts expressed in simple, intelligible, and forcible language, giving both general

information and practical hints in detail as to the sanitation of the dwelling. Such an association is in reality a mutual insurance company for the preservation of private and public health. It is not intended as a substitute for municipal inspection, and will not conflict with the public health authorities, where such exist, but will supplement their action.

DR. E. A. WOOD, of Allegheny, then spoke concerning the importance of organizing a

STATE BOARD OF HEALTH.

Ignorance and prejudice, he said, were the chief obstacles in the way. The community would have to be educated to know and see the dangers before they would try to remedy them. He thought that disease had had its sway too long, and that the true treatment of many diseases dependent on a special germ was the stamping out of the germ.

DR. HENRY LEFFMANN, of Phila., read a paper on

PROPER MEDICAL EDUCATION.

The present system of medical education is not the result of efforts to meet the needs of the community, but is largely an irregular development. The reforms which medical colleges have adopted have been mostly unwilling concessions to public sentiment, and the extension and success of post-graduate schools indicate the direction in which the improvement of the curriculum should be made. A preliminary training for the student before entering on the study of medicine, is so obviously necessary that it need not be argued. The final work of medical reform will be accomplished when the college is made merely the instructor, the license to practise being given by an official board of examiners, after a written public examination.

DR. THOMAS H. FENTON, of Philadelphia, spoke on

HYGIENE IN THE PUBLIC SCHOOLS,

in which he presented the following indictment. The locations of buildings were often on small streets; the houses crowded closely together; the ventilation was poor, or *nil;* the drainage bad; the illumination poor, and not managed according to the best scientific principles; the hours of study too long, and the hours of play too short.

DR. ALICE BENNETT, of Montgomery Co., then delivered the *Address on Mental Disorders,* and choose for her subject,

THE RELATION OF HEART DISEASE TO INSANITY.

The physiological mode of action of brain- and nerve-cells being utterly unknown to us, the manner in which such action may be modified can be but a matter of conjecture. But it is not unreasonable to suppose that irregularities of the circulation, such as are common in organic heart disease, may have an influence in modifying the action of an organ so peculiarly open to impressions as the brain, and whose anatomical connections with the heart are direct and intimate.

Of 500 cases examined in the female department of the Hospital for the Insane at Norristown, taken without discrimination, there were found 101 abnormal hearts, classified as follows: simple irregularity, 11; hypertrophy and dilation, 4; apex systolic murmur, 70; with basal systolic, 16.

Feeble action of the heart was noted among the advanced dements. There was also a very general absence of hæmic murmur. But it is to the coincidence of heart disease with a certain form of chronic mania to which this paper is specially designed to call attention. The histories of sixteen cases possessing similar features, and all presenting evidence of mitral disease, were then given. These cases constitute a distinctive class, easily recognized by the merest novice.

Some of the general features are as follows: They begin generally in middle life. The invasion is gradual, generally ascribed to no cause, or to one obviously inadequate. The first symptoms are invariably hallucinations of one or more senses, generally of hearing, and subsequent delusions of persecutions.

Among this class we find some of the most quiet inmates of our hospitals; some, not obviously insane to casual observation, who have remained in stationary conditions for years; others, beginning in the same way, show a tendency progressing toward a general misconception of all the facts of their daily life. In four of the cases delusions as to identity were present.

Another series of twenty-four cases present salient features characteristic of this class, although not so typical and unmixed as those given above. All have hallucinations of hearing, and all have disease of the heart, generally mitral insufficiency.

Of the forty-seven cases of chronic mania found to have heart disease, forty are mentioned above; of the remaining seven, two began as violent acute mania; three are of a recurrent type, consisting of paroxysms with general incoherence and mixed delusions; one is of unknown history and has delusions relating to wealth. In none are hallucinations known to be present. It is only fair to look at the one hundred and one cases of chronic mania showing no cardiac disease. The list comprises a great variety of conditions. A number began as violent acute attacks that have never recovered. These show all kinds of delusions; generally changing and transitory, and there are some hypochondrical and hysterical cases; a number are traced to the use of alcohol. Very many have an unknown history.

A careful examination of the whole number shows only three cases which bear any resemblance to those given above. One of these is deformed by disease of the spine; she has made homicidal threats in consequence of supposed injuries. One has progressing phthisis, and her insanity was attributed to alcohol; of the third nothing is known except that she goes about beating the walls with her shoes, probably under the influence of hallucinations.

It is not my intention to draw any inference from the above cases, which I do not offer as anything more than a rather remarkable series of coincidences. It has only been shown that among five hundred patients, a certain distinctive form of mania has been found, almost without exception, associated with valvular disease of the heart, generally mitral. Whether the "frequency of the coincidence" justifies the suspicion of a causal relation, is for you to determine. Admitting the suspicion, it must be verified, or the reverse, by continued observations.

DR. R. N. CHASE, of Montgomery County, then read a paper entitled

THE PROTECTIVE RIGHTS OF THE INSANE IN PENNSYLVANIA.

He contrasted the old and barbarous system of abuse

with our present treatment. He ascribed the first movement of reform to Tuke, in 1792, and traced it up to the present time. He reviewed the laws regulating the visits of boards and friends of the patient; explained that patients confined must be supplied with materials for writing to friends and relatives; that notices of the rights of patients should be posted in such places as could be easily seen and read by them; that their letters must be sent promptly, or the reason for failure written on outside of envelope, and that under no pretence was a letter to the patient's attorney or to the Board of Lunacy to be delayed; that abuses by those in charge should be dealt with according to law; that the beds, food, etc., were under the inspection of the Board; that reports on deaths, escapes, etc., were rigidly reported; and, lastly, that in no State or country were the rights of the insane better protected than in Pennsylvania.

DR. J. B. ROBERTS, of Philadelphia, offered a resolution that the Nominating Committee appoint a committee of seven to secure a charter for

A NEW MEDICAL COLLEGE,

to be known as the Pennsylvania Medical College, and to be situated in either Philadelphia or Allegheny County. Said college to have a preliminary examination, and a graded course of three years. Said college to be put in operation only on the condition that the present colleges do not adopt a preliminary examination by that time. This resolution was laid over.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—E. P. Allen, M. D., of Bradford.

Vice-Presidents.—Drs. Jacob Price, of West Chester; D. W. Bland, of Pottsville; C. Brandes, of Erie; and S. R. Rutledge, of Blairsville.

Permanent Secretary.—Dr. W. B. Atkinson, of Phila.

Recording Secretary.—Dr. A. J. Cornell, of Lackawanna.

Corresponding Secretary.—Dr. John G. Lee, of Phila.

Treasurer.—Dr. Benjamin Lee, of Philadelphia.

Committee on Publication.—Drs. R. J. Dunglison, H. Leffmann, of Phila., and E. Jackson, of West Chester.

Judicial Council.—Drs. Traill Green, of Easton, J. A. Ehler, of Lancaster, and W. T. Bishop.

Next Place of Meeting.—Scranton. *Time.*—Second Wednesday in May, 1885.

Chairman of Committee of Arrangements.—Dr. J. F. Everhart. Associates to be chosen by the Lackawanna County Society.

NEWS ITEMS.

WASHINGTON.

(*From our Special Correspondent.*)

YELLOW FEVER NOTES.—Sanitary Inspector Burgess, U. S. M. H. S., reports from Havana that there were 490 deaths in that city during the month of April, 34 of which were from yellow fever, 11 from typhoid fever, and 17 from pernicious fever. Of the 34 deaths from yellow fever, 18 occurred in the military hospital, and the remaining 16 in civil circles. Thirteen deaths from yellow fever are reported by him as having occurred during the first week in May.

Surgeon Murray, U. S. M. H. S., in charge of Ship Island quarantine, reports the arrival and disinfection of one vessel each from Rio and Colon, the latter with a clean bill of health.

The Secretary of State has received information, through the consulate at Maracaibo, that the reported epidemic of yellow fever at Cucula, Venezuela, in which it was stated that 1170 deaths occurred in a few days, is incorrect, an investigation made into the facts showing but 126 deaths in four months from this disease.

LONDON.

(*From our Special Correspondent.*)

TUBERCULAR TUMORS OF THE LARYNX.—At the meeting of the Clinical Society of London held on Friday, April 18th, DR. PERCY KIDD read a paper on tubercular tumors of the larynx. When the patient was first seen the signs of pulmonary mischief were but ill-defined; the laryngeal symptoms were predominant. It is needless to go into the details of this most interesting case; the main feature was the presence of *tumors* in the larynx of undoubtedly tubercular structure; moreover, notwithstanding the great tendency of tubercular formations to undergo caseation and ulceration, the growths in question remained as tumors for a period of no less than nine months. Dr. Percy Kidd discovered the characteristic bacilli in the laryngeal growths.

SIR ANDREW CLARK suggested that a fibrous degeneration of the tubercles might have prevented the development of ulcers, but Dr. Kidd said there was no appearance of fibroid tissue which would justify that opinion. The size of the tumors was about that of a pea; their situation was about the processus vocales. Schnitzler, it appeared, had described a similar case; but, with that exception, Dr. Kidd had searched literature in vain. Since his paper was written, however, he had met with two somewhat similar cases, in which the larynx was the seat of tubercular tumors, but the delay in ulceration was by no means so great.

EXCISION OF THE RECTUM FOR EPITHELIOMA.—The paper on this subject, by MR. HARRISON CRIPPS, excited considerable discussion. The general opinion of the surgeons was to the effect that operation for rectal cancer was decidedly to be recommended. Differences, of course, were mentioned in the modes of procedure.

MR. WALSHAM preferred to use the scissors, and considered that, even though the total extirpation of the disease could not be practised, yet the removal of as much as possible was a good procedure. Contraction of the calibre of the rectum and incontinence of feces were no doubt the great troubles which the surgeon had to contend with after the operation.

MR. BARKER thought that where the entire circumference of the rectum was not taken away, the result was better; for, as in an instance quoted, although the contraction might seem as great, yet practically the obstruction was much less, owing to the slight preservation of normal rectum. It appeared that a valvular arrangement was produced by the retention of a portion of the circumference of the normal rectum.

SIR ANDREW CLARK said that in his experience

cancer of the rectum was not so rapidly fatal a disease as text-books would have us believe. He spoke of a case which had lasted for eight years.

MR. HARRISON CRIPPS did not agree with Sir Andrew's observation, but he mentioned that in one of the cases on which he had operated the patient was alive eight years after the surgical treatment.

MR. RICKMAN GODLEE advocated the use of Pacquelin's cautery. He also referred to a case in which repeated scraping seemed to have prolonged life.

TUBERCULAR MENINGITIS.—DR. ANGEL MONEY reported the case of a female infant, aged nine months, who had a "fit," followed by hemiplegia of the left side, one month before she was first seen. There were no other signs or symptoms of disease except the hemiplegia at this period. The baby was extremely fat. Two or three weeks later the "fits" recurred, the breathing became changed in rhythm, and on the last day of life the temperature rose to 107.7°. The presence of ankle clonus was mentioned as interesting. At the autopsy there was a great amount of disease in the form of tubercular meningitis. The cause of the hemiplegia was, however, thrombosis of a large branch of the right middle cerebral artery. This thrombosis might have been produced by the meningitis, or might have been the result of embolism, seeing that Dr. Angel Money discovered a duckweed-like growth on the smaller flap of the mitral valve. The other organs of the body gave evidence of a general tuberculosis.

In the discussion of this subject, Drs. Glover, Heron, and Tonge Smith referred to cases of evanescent paralysis.

ASSOCIATION OF MEDICAL SUPERINTENDENTS OF AMERICAN INSTITUTIONS FOR THE INSANE.—The thirty-eighth annual meeting of this Association was held at the Continental Hotel, in the city of Philadelphia, commencing on Tuesday, May 13, 1884.

The following addresses, commemorative of the Fortieth Anniversary of the Association, were delivered.

History of the Association and its Necrology, by Dr. John Curwen.

Causes of Insanity in America, by Dr. G. A. Shurtleff.

Progress in the Treatment of the Insane, by Dr. H. P. Stearns.

Progress in Provision for the Insane, by Dr. W. W. Godding.

Progress in the Pathology of Insanity, by Dr. Daniel Clark.

MEDICAL SOCIETY OF NEW JERSEY.—The next annual meeting of the Medical Society of New Jersey will be held in the Stockton House, at Cape May City, on Tuesday and Wednesday, June 10 and 11, 1884. The address by the President, Dr. J. Wicks, will be delivered Tuesday evening. A complimentary train, for the physicians and their families, will leave Camden for Cape May on Tuesday at 12 o'clock M.

COLLEGE OF PHYSICIANS AND SURGEONS OF NEW YORK.—At the seventy-seventh annual commencement of the College of Physicians and Surgeons of New York, held on May 13, the degree of M.D. was conferred upon one hundred and five graduates. The Alumni prize of five hundred dollars was awarded to Dr. M. Allen Starr, of New York.

ILLINOIS STATE MEDICAL SOCIETY.—The thirty-fourth annual session of this Society will convene in Chicago on May 20th.

COLUMBUS MEDICAL COLLEGE.—The annual commencement of this school was held on March 7th. Diplomas were conferred upon thirty-five candidates.

STARLING MEDICAL COLLEGE.—At the thirty-seventh annual commencement of this school, held on March 5th, twenty-five candidates received the degree of M.D.

TRICHINOSIS IN GERMANY.—It is officially stated that last year, at Ermsleben, a small town of Prussian Saxony, four hundred and three persons were seriously ill, and sixty-six died from trichinosis. The disease was caused by eating raw pork, which all came from one hog.

ACTION OF THE FACULTY OF JEFFERSON MEDICAL COLLEGE ON THE DEATH OF PROF. S. D. GROSS.—

THE JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA.
Thursday, May 8, 1884

The Faculty have learned with profound sorrow the death of their late colleague, the Emeritus Professor of Surgery, Dr. Samuel D. Gross. First as a student within its precincts, and afterwards its most eminent professor, his career constitutes one of the chief glories of this College. He was alike distinguished in all the fields of intellectual activity open to the medical profession. As a practitioner of surgical art, as a teacher and professor of surgery, and as author of a great surgical treatise, he stood in the front rank of the world's great men devoted to these pursuits. Whilst we thus do homage to his mental powers, we are not less appreciative of those admirable personal traits and social gifts by reason of which he endeared himself to the whole body of the medical profession.

We offer to his family our sincerest condolences on their irreparable loss. In testimony of the reverence in which we hold his memory, we cause this memento of our grief to be entered on the minutes of the Faculty, and it is hereby ordered that the large painting of the deceased Professor, now in the Faculty-room, be draped in mourning.

By the Faculty,
ROBERTS BARTHOLOW, M.D.,
Dean.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 6 TO MAY 12, 1884.

WEBSTER, WARREN, *Major and Surgeon.*—Granted leave of absence for six months, from April 29, 1884, on account of sickness.—*Par. 5, S. O. 103, A. G. O.*, May 3, 1884.

STERNBERG, GEORGE M., *Major and Surgeon.*—Now at Governor's Island, New York harbor, ordered to repair to this city (Washington, D. C.), to represent the Medical Department of the army at the annual meeting of the American Medical Association, to meet on May 5, 1884, and, on adjournment of the Association, to return to Governor's Island.—*Par. 2, S. O. 103, A. G. O.*, May 3, 1884.

THE MEDICAL NEWS.

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ORIGINAL ARTICLES.

LACERATIONS OF THE FEMALE SEXUAL ORGANS CONSEQUENT UPON PARTURITION;

THEIR CAUSES AND THEIR PREVENTION.[1]

BY S. D. GROSS, M.D., LL.D., D.C.L. OXON., LL.D. CANTAB.,

EMERITUS PROFESSOR OF SURGERY IN THE JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

My object in appearing before you, as stated in the programme, is to read a paper on lacerations of the female sexual organs consequent upon parturition. It may seem odd, if not impertinent, to those of you who do not know me intimately, that I should venture to discourse upon such a subject so essentially in the hands of specialists; but they will perhaps pardon me if I tell them that, although I have all my professional life, now extending over a period of fifty-six years, been a general practitioner, yet during the first third of a century of that life I was more or less extensively engaged in obstetric practice; while during the last third I have had more or less to do almost daily with the treatment of female diseases requiring the use of the speculum and operative interference of various kinds. I have performed ovariotomy, and on numerous occasions sutured the perineum and the vesico-vaginal septum with a degree of success, if not highly flattering, at all events respectable. Within a short time after my entrance into the profession, I translated Hatin's *Manual of Obstetrics*, a small volume which had an extensive circulation in its new dress; in 1839 I contributed several pages in my work on *Pathological Anatomy* on "Uterine Moles," founded upon original observations and dissections; and in 1854 I unearthed, after much labor and research, Ephraim McDowell's claims to the fathership of ovariotomy, up to that period generally ascribed to other sources. Moreover, as a writer on systematic surgery, compelled to keep abreast with the knowledge of the times, I have embodied in my treatise an elaborate chapter on the diseases and injuries incident to the genital organs of the female sex, reflecting, at least in some degree, an outline of the existing state of the science. I make these remarks, in anticipation, as a justification for bringing before the Section a subject which, in some of its relations, has been so often and so elaborately discussed by many of the ablest men all over the civilized world. I might have taken my budget before the Surgical Section, but believing that fairer justice would be meted out to it here, I have given it this direction. When I shall have finished my task I trust you may not be able to say with Appeles, "Ne sutor ultra crepidam;" but rather incline to Tacitus, "Nihil scriptum miracuti causa."

It is astonishing how much has been written on the treatment of these lesions, and how little has been said upon their causes and prevention. Operations almost innumerable have been devised for their relief; volumes have been written upon the subject, and everywhere, in town and city, the gynecologist is ready to offer his services in sewing up lacerations of the genital organs of maltreated and unfortunate women. Seldom do we hear the voice of any of them raised in behalf of preventive measures, and then only in an indirect or roundabout manner. I am here this evening, not to wrestle with shadows or imaginary demons, but with stern realities, and to speak the truth, the whole truth, and nothing but the truth, as I understand it. The time has arrived when this matter should be met in a bold and fearless manner.

The lacerations of which I desire to speak are those which affect—(1) the perineum; (2) the vesico-vaginal septum; (3) the recto-vaginal septum; (4) the neck of the womb; and (5) the urethra, or mouth of the urethra and of the vagina. A few remarks under each of these heads will suffice for my purpose.

Laceration of the perineum is of frequent occurrence, and cannot always be avoided even under the most judicious management. In primiparæ, the fourchette is almost invariably ruptured, especially when the tissues are unusually rigid, and the protruding structures are very large, or very rapid in their descent, or where the perineum is not properly supported. Fortunately, such an occurrence is of little moment, as it respects the patient's welfare, either present or prospective. But it is very different when the rupture is extensive, involving a large portion of the perineum, or perhaps extending—as not infrequently happens—through the sphincter muscles of the anus and the lower extremity of the vagina. Then such an accident constitutes a great evil, and demands more or less skill for its cure.

Lacerations of the vesico-vaginal septum are among the saddest of calamities, entailing, if not successfully remedied, endless suffering upon the poor patient. I know of nothing more calculated to excite our sympathy, or to enlist the noblest qualities of our nature. In the worst forms of such accidents, in which science and skill offer no relief, as occasionally happens even in these enlightened days, death would be a welcome visitor. Equally distressing is a recto-vaginal fistule, or a rent with loss of substance in the urethra.

Lacerations of the neck of the uterus, even when comparatively slight, often entail great suffering, local and constitutional; the former manifesting themselves in various kinds of pains and discharges, and the latter in almost every form of nervous dis-

[1] Read before the Section on Obstetrics and Diseases of Women, American Medical Association, May 8, 1884.

orders of which it is possible to form any conception, together with more or less derangement of the digestive and assimilative organs. Of the frequency of these accidents, an idea may be formed when I state, what has long been known to most of you, that one of our most distinguished native writers on gynecology has expressed his conviction that rupture of the neck of the uterus, in greater or less degree, is almost inseparable from a first labor. Whether Dr. Emmet is correct in this conclusion, is a question which remains to be determined. If it be true, it would inevitably go to prove that God has made woman much less perfect than the world has given him credit for. As childbirth is one of the special prerogatives of woman, designed to perpetuate the race, there is something peculiarly distressing in such an idea. Looking at the matter from a practical standpoint, one would naturally conclude that the Author of our being had constructed the womb with special care to protect the organ, at least as a rule, against the possibility of a contingency fraught with such sad consequences. If we assume the correctness of Dr. Emmet's statement, we may well wonder, without irreverence, why Almighty God did not create simultaneously with woman a competent gynecologist, ready to meet this inevitable evil, for such unquestionably it must be whenever it occurs. If this evil is the outgrowth of civilization, then the sooner we get rid of this civilization the better will it be for our poor wives and daughters, considered as procreating beings.

It was a happy circumstance when, in 1851, Sir James Y. Simpson first called attention to this important subject. It was like the discovery of a new world in human progress. In the *Proceedings of the Edinburgh Obstetrical Society*, for January of that year, he proclaims the important truth, until then unknown, or only guessed at, that fissuring and laceration of the cervix are not, as had been generally believed, rare lesions during labor, but, on the contrary, very common occurrences, especially in primiparæ, and he supports his views, not only by what he saw with the aid of the speculum, but by an appeal to autopsies in which rents and fissures were detected in the mouth and neck of the uterus after natural labor. The facts thus pointed out by the great Scotch professor were afterwards—namely, in 1869, and again in 1874—brought more fully before the profession by Dr. Emmet, in two important papers published in the *American Journal of Obstetrics*, where they soon attracted general attention. To these two distinguished men, then, are we mainly indebted for the knowledge which we now possess upon this important subject; knowledge of priceless value to suffering woman, and of the greatest consequence to the obstetric practitioner.

If we inquire into the exciting *causes* of these accidents, it will be found that they vary with the situation and structure of the parts involved in them. The great factor in laceration of the perineum is parturition, either alone or in conjunction with the means employed to effect it. When this wall to the outlet of the pelvis is very rigid, and the action of the uterus unusually vigorous, forcing down the head of the child with great vehemence, it is easy to conceive not only of the possibility, but of the great likelihood of such an accident, especially in the absence of proper support. In such a condition the perineum is very much, to use a figurative expression, in the position of the door of a room, with a big, burly fellow on the inside, knocking for egress. To carry out the simile, he does not in every case batter down the whole of the opposing obstacle, but only a portion of it, representing a comparatively slight laceration, as where the fissure is limited to the fourchette, or to the anterior portion of the perineum, while, when the resistance is extreme, the entire wall is torn, the lesion extending, through the sphincter muscles, into the rectum; in other words, the entire door is battered down, and the vagina and bowel are laid completely open.

Of the various kinds of lacerations of the vagina, or of the vagina and the uterus, constituting what are known as fistules of the bladder, or of the rectum, those dire calamities which form so prolific a field for operative interference, the most common factor unquestionably is either prolonged or very severe pressure. "This is," says Thomas, in his able work, "beyond all doubt, the most prolific source of the accident, though it may also attend a rapid labor in which the vagina has been pressed against some point of the pelvis with great violence." The active agent of this pressure is generally the child's head, especially when it is disproportionately large or wedged in behind the pubic symphysis, unduly compressing the vesico-vaginal septum, followed by destructive inflammation and sloughing. The accident is generally the result of protracted pressure, as when the child's head has been wedged in in this position for many hours, neither, perhaps, receding nor advancing; or it may be caused in a very short time, as when the pressure is unusually concentrated and severe. If the pains are very violent, the pressure of the presenting parts may be so great as to end in actual rupture of the vesico-vaginal septum, but, as a rule, the opening is the direct result of concentrated pressure, eventuating in inflammation and sloughing, precisely as in an ordinary bedsore. Vesico-vaginal fistules are not infrequently produced by the pressure of the child's head upon a distended bladder. How far the maladroit use of the forceps, vectis, or other instruments may be capable of producing such lesions will form the subject of future inquiry.

The principal causes of lacerations of the cervix are precipitate labor, labor attended with rigidity of the mouth of the womb, and instrumental labor. Lacerations are not uncommon in breech cases, in which delivery is obliged to be expedited on account of the retained head before the cervix is properly dilated. These are unquestionably the most frequent and efficient factors in the production of accidents in this situation. If to these we add the presence of cicatricial tissue in the cervix, malpresentations, and section of the cervix, as occasionally practised by ignorant obstetricians, we have a complete list of all the causes, active and

predisposing, of rupture of the uterus during normal parturition. A premature discharge of the amniotic fluid acts mainly, I presume, as a means of retarding labor than as a cause of laceration of the cervix. I must not omit to allude here to a statement of Dr. Emmet that laceration of the cervix is of frequent, if not common, occurrence in cases of criminal abortion. I do not know that this fact has been noticed or verified by other observers, but of its truth I entertain no doubt. In his tables, Dr. Emmet gives ten cases of this kind, and he declares that he has met with this accident in every instance where the woman admitted the fact of exposure to malpractice.

Having thus briefly discussed the situation and causes of the accidents in question, let us, in the next place, inquire into the best means of preventing them, the chief object which I have had in view in bringing this matter before you to-day. There is more honor in one ounce of preventive midwifery than in one pound of curative gynecology, the outgrowth of ignorant or meddlesome obstetric practice. That many of these occurrences are inevitable without any just blame attaching to the professional attendant is well known to every practitioner of the least experience, but that they may, as a rule, be prevented by the exercise of proper care and skill will, I think, be readily admitted; at all events it is true.

The great remedy, as laid down in the books, for rigidity of the perineum is manual support during the descent of the child's head, or whatever else the presenting parts may be; this, as a rule, is quite sufficient; but not so when the resistance is very great. In this event, the accoucheur is expected to make use of the hot bath and of hot fomentations, to anoint the parts with oil, and even, in extreme cases, to make slight incisions on each side of the middle line. Nothing is said in these injunctions of the abstraction of blood as a means of relaxing this tense, resisting wall which so obstinately stands in the way of the completion of the parturient process. What are the active agents of this resistance? Unquestionably the muscles of the perineum, the sphincters of the vagina and anus, the transverse muscles, and the elevator muscles of the anus. The skin and connective tissue offer no obstacle. The whole difficulty resides in the muscles, and its amount is precisely in proportion to their development, great in strong, young, robust women, and comparatively slight in those of an opposite character. If this statement be correct, and no one can doubt it, it follows, as a necessary corollary, that the obstacle is most readily overcome by some measure that will relax the perineal muscles. Hot water, oil, and medicated unguents will not do this, and no sane man would wait for the tardy and uncertain effects of local bleeding. A far better plan is to take blood at once from the arm from a free orifice in one of the large veins, the patient sitting up in bed during the operation, so as to produce the most rapid and decided impression at the least expense of the system. If there be anything better than this, anything more likely to answer the purpose, I am not aware of it. The loss of ten, twelve, sixteen, or even twenty ounces of blood can do no harm in such a condition of things. A few days under proper treatment always suffice to replace it, while, as a rule, it promotes rather than retards recovery, by rendering the woman less liable to puerperal fever, peritonitis, and pelvic cellulitis.

In regard to lacerations of the vesico-vaginal septum, much may be done in the way of prevention, and so also in regard to rents into the rectum. It is self-evident that anything that lessens the size of the canal through which the child is to pass, or that seriously interferes with the descent of the child's head, must act as an impediment to delivery. All obstetric teachers are aware of this fact, and hence they take special pains to instruct the young practitioner to see that the rectum is well emptied during the later stages of pregnancy, or, at all events, on the approach of labor, and that the urine is evacuated from time to time as the labor progresses. These precautions are unquestionably most important safeguards, and, if duly attended to, are rarely followed by serious injury. If, on the contrary, they are neglected, as I fear is not infrequently the case, especially among the lower classes of women, it is easy to conceive that the consequences must be of the most direful nature, especially if, superadded to these obstacles, there is an impacted condition of the child's head along with violent uterine contraction. Under such circumstances it is difficult to conceive how the poor patient could escape injury in some form or other. The machinery must break down somewhere. A few hours may suffice to do the mischief. The only remedy, of course, is the forceps or crotchet, and the former cannot be applied too soon. The bladder must be liberated, or a vesico-vaginal opening, if not something worse, will be the inevitable result.

The proper remedy for the relief of the stationary head, whether impacted or simply arrested by the inertia of the womb, is—provided the cervix is sufficiently dilated, or dilatable—the forceps, that "noble instrument," as it was called by Chapman, who, in 1733, published the first account of it, upwards of one hundred years after its invention by Paul Chamberlen, of England. I shall not speak of the numerous modifications which this valuable instrument has experienced in the hands of the obstetricians, or detain you by asking whether the long instrument is preferable to the short, or the short to the long. In the hands of the judicious practitioner, each has a distinct and separate value; but it will be pertinent to the object of this paper to inquire into the reasons which have led to the great changes which have taken place in regard to the frequency of its use.

Beginning with the great Baudelocque, the most illustrious accoucheur of the last century, we find that he applied the forceps once in 561 cases; Clark in 728; Collins in 617; Lachapelle in 293; Baer in 274; Boivin in 214; Davies in 53; Naegle in 31; Kluge in 16; Carus in 14, and Siebold in 7.[1] Smellie, who flourished in the middle of the last century, and who was the most famous accoucheur

[1] Robert Lee's Table, in Lectures on Midwifery.

in his day in Great Britain, applied the forceps once in 125 labors; and Merriman, another distinguished English obstetrician, once in 93.

From the late Dr. Churchill, of Dublin, we learn that in Great Britain, until recently, the forceps were employed once in 249 cases; in France, in 140; and in Germany, in 106.

In this country, the present fashion is to apply the forceps very frequently, both in private and in hospital practice. Some of my friends inform me that some accoucheurs resort to the instrument as often as once in 4 labors; others in 6, 8, or 10. Whether the forceps are employed as often in Great Britain and on the Continent of Europe, I am unable to say; but the difference, if any, must be very trifling.

Dr. William P. Dewees, who was the great Philadelphia accoucheur in his day, and who delivered upwards of ten thousand women, writing in 1843, holds the following language in regard to the use of the forceps: "However strongly I may be impressed with the utility of the forceps, I should not feel myself warranted to use them as often as they appear to be in Great Britain and on the Continent of Europe. The frequency with which they have been employed in some instances is really alarming, and, I had like to have said, must have been too often unnecessary. In my own proper practice, I have not employed them oftener than once in three hundred and fifty cases, though I have been under the necessity of using them very frequently in the practice of others."[1]

Notwithstanding that Dewees so seldom employed the forceps in his own cases, we nowhere find that he had any serious lacerations of the genital organs. In the tenth edition of his *Treatise on the Diseases of Females*, published in 1854, "with the author's latest improvements and corrections," not one word is said upon the subject, not even upon rupture of the perineum. Now, if such accidents had occurred under his observation he could hardly have failed at least to mention the fact. If I am told that Dewees did not use the speculum, and could, therefore, not detect them, I reply that he had eyes to see, and fingers to feel. He certainly could tell what the nature of the case was when urine or fecal matter flowed off by the vagina. Philadelphia's great accoucheur, Dr. Ellwood Wilson, has superintended, as he informs me, 10,600 cases of labor at the Lying-in Hospital in that city, without the occurrence of a solitary instance of vesico-vaginal, or recto-vaginal fistule. He, like others engaged in large private practice, has witnessed numerous atrocities in consultations. The testimony of my late colleague, Professor Ellerslie Wallace, is precisely of the same import.

In a discussion of the admirable paper of Dr. Emmet, "On the Necessity for Early Delivery, as demonstrated by the Analysis of 161 Cases of Vesico-vaginal Fistula," read before the American Gynecological Society, in 1878, Dr. D. Humphrey Storer declared that, in an experience of several thousand cases of midwifery, he had witnessed only two cases of vesico-vaginal fistule, adding that there was no man in Boston who applied the forceps less seldom than he. He approved of the employment of the forceps in certain conditions of labor, "but the idea," he remarks, "that the forceps is an instrument which must be almost constantly used is, I think, a dangerous one." This sentiment was elicited by the statement of Dr. Emmet that the great factor in the production of vesico-vaginal fistule is impaction and long detention of the child's head, aided by distention of the bladder, and the assertion that instrumental delivery has rarely, if ever, any agency in the production of this sad occurrence.

Dr. H. P. C. Wilson, of Baltimore, on the same occasion, asserted that he had made it a rule for many years, when called to a case of labor, to carry with him a bottle of chloroform and a pair of forceps, adding that he had frequently used the forceps when he was certain that the woman would be delivered safely by nature, simply to shorten the labor and relieve suffering. Dr. John L. Atlee, in referring to Dr. Wilson, said, "the older I grow the more apt I am to employ the forceps." In opposition to these sentiments, I take leave to cite the views of America's latest writer on obstetric medicine, Dr. Lusk, as expressed in his admirable treatise, *The Science and Art of Midwifery*, the second edition of which was issued only a few months ago. "I can only say," declares this excellent author, "that, with increasing experience, my own practice has grown more and more conservative, and my own belief is that true wisdom requires us to abstain from even trivial operations, so long as nature is able to do her work without our assistance."

Is it not a fact, I would ask, that the forceps are often used merely as a means rather to save the time of the accoucheur, than as a means to prevent the suffering of the poor woman; to enable him to meet another engagement, to visit the theatre, or to attend a dinner or an evening entertainment? Passing along the streets not long ago, said Dr. Goodell to me a few months since, my eye lighted upon a gentleman walking rapidly on the opposite side, who, the moment he recognized me, shook his green bag at me, exclaiming, "reed birds for supper," and hurried on.

I take leave here to quote what I deem eminently pertinent to this part of my paper, a passage from a communication that appeared in the New York *Medical Record*, March 8th, of the present year, from the pen of Dr. A. E. Dugas, of Augusta, Georgia: "When I graduated in 1875, an old sage in the profession advised me as follows: 'My boy,' said he, 'I am an old man; I have practised over fifty years, and, as you are aware, have been very successful. In regard to your labor cases, I would give you the following advice: First, as you intend practising in the city, make it a habit of leaving your forceps at your office, for, if you ever require them, you will always have ample time to send for them, and your not having them with you may save some women much trouble. Second, do not examine your patient much or often; see that

[1] Midwifery, p. 272.

things are right, and then let nature manage the case.'"

The "old man" here alluded to is no less a personage than the great and venerable Dr. Louis Alexander Dugas, a man of vast experience as a practical surgeon and accoucheur, and emphatically one of the sages of our profession. How wise such advice is in contrast with the accursed practice of the day, when every obstetrical fledgling thinks himself competent to use the forceps, and is anxious to get to his "reed-bird supper," I leave you to judge.

If all accoucheurs were well educated and well versed in the use of the forceps, there might be some justification for the frequency with which they are applied at the present day. There might even be some justification in hitching them on the child's head, when nature is fully equal to her task, to get home in time to a good supper; but to use them on the slightest pretence, as is so often done now-a-days by every sciolist, hardly out of his swaddling clothes, is, if you will allow me to say it, simply damnable. Surely our obstetric teachers have a great deal to answer for in sending forth every year armies of incompetent young accoucheurs. Surely they commit a grave sin when they teach the frequent application of this "noble instrument," employed far too seldom in former times, as it is certainly employed too often in ours. In conversing recently upon this subject with a distinguished obstetric teacher, now retired, he said to me, "I always enjoined it upon my pupils, after pointing out to them the uses and abuses of the forceps, to carry the instrument with them to every case of labor, adding that it was just as important as it is for the mariner to carry his compass with him to sea." Without wishing to disparage the judicious use of the forceps, which I have no right to do, and which God forbid I should do, I think a careful consideration of the case justifies me in endorsing the opinion of Baudelocque, uttered more than a century ago, that the forceps, as generally used, have done more harm than good, and in this view I am glad to be able to say that I am sustained by many eminent, able, and experienced obstetricians and gynecologists of the present day.

That many accidents happen for the want of a proper use of the forceps, or of their timely application, is proved by the numerous cases of vesico-vaginal and other fistules, and by the still not infrequent sacrifice of the child, if not also of the mother; of the former by fatal compression or craniotomy, and of the latter by exhaustion, heart clot, pulmonary obstruction, or other causes. It would be difficult to find in all the records of obstetric medicine a case which more sadly and forcibly illustrates the baneful effects of the want of the proper use of the forceps than that of the Princess Charlotte, whose death, in 1817, threw the whole British nation into mourning. The amniotic liquor had been discharged early in the labor, and although the head had long been in the lower strait, the delivery, which took place at the end of fifty-two hours, was entrusted entirely to nature's efforts. No wonder that the child was still-born, and that the poor woman, exhausted by her protracted labor, expired soon after her delivery. No wonder that her principal accoucheur, Sir Richard Croft, committed suicide as the best remedy for his sad blunder and consequent mortification!

I come, in the third place, to inquire briefly into the proper preventive treatment of lacerations of the cervix. We have said that these injuries are most common, by far, in primiparæ, especially when pregnancy occurs in women somewhat advanced in life. Spiegelberg found that the average duration of labor in five hundred and six primiparæ was seventeen hours, and twelve hours for multiparæ. After the thirtieth year, the duration is materially increased, amounting, according to Hecker, in primiparæ, to twenty-one hours, and, according to Ahlfeld, to twenty-seven hours.[1] If we ask what is the cause of this difference in the duration of labor in primiparæ and multiparæ, we shall find a ready answer in the difference in the pliancy and softness of the genital organs, and in the fact that the way is paved by the previous parturition. In primiparæ, especially in elderly ones, the genital organs are hard, firm, inelastic, unyielding; in multiparæ, on the contrary, they are comparatively soft and dilatable, yielding readily before the advancing head. In the one case the labor is comparatively easy, rapid, and safe, both to mother and child; in the other, painful, protracted, and fraught with danger; the uterus and perineum, not to mention the vaginal septa, are liable to be torn, and the child often perishes from injury inflicted upon its head and lungs. If, in such a labor, delivery be attempted with the forceps before the parts are properly relaxed, or if attempts be made to dilate the parts forcibly with the fingers, it is easy to perceive that rupture, of a more or less serious nature, must inevitably happen.

Since the attention of accoucheurs was first directed to the frightful frequency of lacerations of the cervix in primiparæ by Simpson and Emmet, the subject has assumed a degree of importance previously undreamed of, and the question naturally arises here: How are these injuries to be avoided? How are we to abridge the duration of labor in primiparæ, and to place them on the same level with the multiparæ? There is but one way to accomplish the object, and that is by the employment of relaxing agents. It is a well-known fact that labor is more easy in hot than in cold climates, a circumstance which would naturally lead us to employ hot applications, as the hot bath, hot fomentations, and hot injections. I will not deny that such agents might occasionally do good, but what sense is there in parboiling a woman when we have at hand other agents far more speedy and more efficacious in their action. I do not allude here to chloral, ether, chloroform, and tartar emetic, the last of which, from its tendency to produce vomiting, could hardly in any case be a safe remedy, while the former, with some advantages, would seldom prove reliable to bring about the desired result. The great remedy which I have in my mind's eye is venesection, car-

[1] Lusk, Science and Art of Midwifery, p. 134. Second edition, 1884.

ried to a reasonable but sufficient extent to relax the system and through the system the genital organs. I do not introduce this as a new remedy, for general bleeding to overcome rigidity of the uterus and perineum was practised long ago, and is still practised by many of our older physicians under such circumstances; but I desire to recall attention to it as the most prompt, powerful, and efficacious of all the agents that the accoucheur can press into his service for the attainment of this end. I am not abashed if I am told, at the very threshold of this announcement, that venesection is an obsolete art, that none but old fogies would think of employing it, and that the blood during pregnancy undergoes such great changes as to render the loss of it, except in puerperal convulsions, an improper expedient during labor with a view of expediting it.

There was a time when this agent was very generally, I had almost said, universally used, even in my early days, in great rigidity of the sexual organs; fortunately, that day has gone by. But if the lancet was used too much then, it is certain, at least to my mind, that it is not used enough now. We are too apt, as a profession, to be influenced by prejudice, especially when it is backed by great authority. When the wether jumps the rest of the flock are sure to follow. I recollect when it was customary to bleed pregnant women for the relief of headache, dizziness, or vertigo, pulmonary congestion from aortic obstruction, and pelvic and sacro-lumbar pains. The "false pains," as they are termed, often so harassing and worrying as to be a source of real suffering, may generally be promptly relieved by the abstraction of eight, ten, or twelve ounces of blood; and who would not bleed, bleed freely, when a plethoric pregnant woman is threatened with convulsions? To withhold the lancet in such a condition would simply be criminal, and yet some obstetricians, even of world-wide renown, would content themselves with the exhibition, in such an event, of chloroform, of chloral hydrate, or of both articles combined.

If I be told that a pregnant woman should not be bled because, while in this condition, she experiences a marked decrease of the red corpuscles of the blood, I answer that this would be simply begging the question. If this were the only change which this fluid undergoes to meet the physiological necessities of the system during utero-gestation, there might be some reason for such a conclusion. But this is not the fact, for, while there is a marked diminution of red globules, there is also a marked increase of fibrin and albumen, assimilating the mass of this fluid to the condition in which it is found to be in inflammation. Instead, therefore, of using these changes as an argument against the use of the lancet, they afford the strongest possible evidence in favor of it whenever a powerful relaxant is required to facilitate parturition. May plethora not be caused by the presence in the blood of an undue proportion of its fibroid, albuminoid, and aqueous constituents? Blood is formed rapidly in pregnancy, to meet the demands of the system, and it is not at all necessary to perform experiments on bitches to prove what daily passes under our observation in the human subject. The great strength, the exuberant health, the florid cheek, and the genial warmth diffused throughout the entire system, sufficiently attest the presence of an active circulation, with an abundance of red globules, although they may be relatively fewer than in the non-pregnant state. No rational accoucheur would bleed an anæmic woman, or a woman laboring under cardiac disease, aortic insufficiency, chronic malarial fever, or any wasting malady whatever. Such affections point out their own remedies—supporting, and not depleting measures.

There is an idea, almost universally prevalent, that the people of the present day do not bear loss of blood as well as they did forty, or even twenty, years ago, an opinion which has exerted such an influence upon medical men, as well as upon the public at large, that venesection has become an obsolete operation, or an operation which is, at most, limited to a few old fogies—as they are sarcastically styled—ignorant of the benign progress of the healing art, and of the tolerance of the system. Whether this opinion be true or erroneous, this is not the time nor the place to inquire; suffice it to say that my solemn conviction is that the neglect into which this operation has fallen, not only in midwifery, but in general practice, is the cause, annually, of the loss of thousands upon thousands of human lives that might otherwise be saved.

If I were asked under what circumstances a pregnant woman, in sound health, without any complications, ought to be bled, I should answer, first, when she is threatened with abortion, miscarriage, or convulsions; secondly, when there is a rigid os, obstinately refusing to yield after the labor has been in progress for six, ten, or twelve hours; thirdly, as a rule, in tardy labor in primiparæ, especially after the age of thirty; fourthly, where there is, so to speak, rigidity of the general system, including, of course, the sexual organs; fifthly, when there is a decidedly feverish condition of the systen, associated with severe headache, great heat and dryness of the genital organs, a rigid os, or os and perineum, and inefficient, teasing labor-pains; and, lastly, in torpor of the uterus from the effects of inflammation, gout, or rheumatism, interfering with or retarding delivery. In all, or, certainly, in most of these conditions, I should follow up the effects of the bleeding with an anæsthetic, or a hypodermatic injection of morphia. I solemnly believe that, if these rules were properly observed, the process of parturition would be greatly facilitated, the pains of labor materially abridged, and the risks of lacerations, which now stand as such a blot upon obstetric practice, would be reduced to the merest minimum, not to say anything about the much greater safety of the child, and of the more rapid recovery of the mother.

As to the quantity of blood to be abstracted, every case must be met on its own merits. While in some instances the loss of a few ounces may suffice, in others, especially in strong, robust, plethoric women, sixteen, twenty, or even thirty may be required. Dr. Dewees, to whom is justly due whatever praise or blame attaches to this practice, occasionally bled to

the extent of forty ounces before he succeeded in overcoming the rigidity of the os. Sometimes, indeed, he carried the operation even to syncope; always placing the patient in the erect or semierect position, so as to expedite and increase the effect.

Dr. Dewees informs us that he was led to adopt the employment of general bleeding in midwifery, near the close of the last century, from having witnessed its beneficial effects in the practice of Dr. Physick, in relaxing the muscles in dislocations of the shoulder-joint.

Out of the injuries now considered, often unavoidable, but in the great majority of cases the effects of gross ignorance, timidity, indecision, or the maladroit use of the forceps and of other instruments, has grown gynecology, a twin sister of surgery, the scientific foundation of which was laid hardly thirty years ago by the immortal Sims, aided by Bozeman, Thomas, and Emmet, of America, by Baker Brown, of London, and by Gustav Simon, of Heidelberg, all pioneer laborers in this great field of the healing art, now trodden by many thousand feet, and illustrated by special treatises and contributions alike honorable to their respective authors and creditable to their respective countries.

IMPACTED FRACTURE OF FEMUR IN A WOMAN OF EIGHTY-FIVE YEARS; BONY UNION.

By D. S. LAMB, A.M., M.D.,
ARMY MEDICAL MUSEUM.

The healing of fractured bones in the aged is looked upon by most authorities in surgery as a result rather to be expected than not, especially if the fragments have been impacted, and have not been separated by the unwise interference of the medical attendant. Prof. Agnew supports this opinion by a case of fracture of the thigh bone at ninety-five years of age, in which bony union took place.

I take it, however, to be rare for the opportunity to be afforded to *verify* the seat and character of fracture and mode of union in patients of advanced age, by post-mortem examination, and as such an opportunity occurred to me a few months since, and the specimen has been preserved, I have thought that the clinical and post-mortem data might be of interest enough to place on record.

M. A., white, widow, had always been healthy, except that in her youth she was paralyzed in the right arm, and the paralysis became permanent. Her mind was in a condition of progressive imbecility at the time of the accident mentioned below. On the 4th of March, 1881, she attained her eighty-fifth year, and the same day, in descending the stairs, she missed the lowest step, and fell to the floor. She was at once placed in bed, but no serious trouble was suspected until two days later, when I was called. The left leg and foot were everted; there was shortening of about half an inch; no crepitus, but pain on moving the limb, and much resistance on attempting extension; there were swelling and ecchymoses in the trochanteric region. She was kept at rest as much as possible, but in the weakened condition of her mind she repeatedly forgot her injury and attempted to use the limb. On the 8th of March, Prof. Thomas B. Hood saw her, in consultation with me. Her age and mental weakness considered, neither of us expected union to take place. The better, however, to secure rest a starch bandage was applied and morphia given in small doses. A bedsore threatened to form, but was averted. There was no appreciable rise in the temperature, and her appetite continued good. In a month she sat up in bed—in a year walked without support. In the autumn of 1883 she began to lose appetite, flesh, and strength, and in October took to her bed. She died October 28th, nearly three years after the injury, and in her eighty-eighth year. Her imbecility had steadily increased.

Only a limited examination of the body was permitted, that of the head especially being forbidden. A rapid survey of the organs of the chest and abdomen showed no lesion other than a general atrophy. The left femur was removed and the surrounding soft parts examined; the arteries showed no atheroma or calcification. The bone, after maceration, presented the following appearances: Its general condition is good; length fifteen and one-quarter inches (one-half inch shortening); weight just eight ounces. The line of fracture extends diagonally through the great trochanter from the posterior inferior to the anterior superior angle, thence downwards a little external to the anterior intertrochanteric line to about one inch below the lesser trochanter, thence upwards and backwards, one inch external to the posterior intertrochanteric line, to place of beginning; the posterior portion of the neck is also impacted to the depth of one inch, the line extending from the lower outer angle of the neck upwards and backwards in front of the lesser trochanter into the digital fossa, so that while anteriorly the length of the neck is normal, posteriorly the curved margin of the head is just half an inch (instead of an inch and a half, as it should be) from the intertrochanteric line. The summit of the head is on a level with the upper border of the great trochanter.

MEDICAL PROGRESS.

Active Interference in the Management of Abortion.—A recent number of the *Zeitschrift für Geburts. und. Gynäk.* contains an article by Dr. H. Spoendly, of Zurich, on the above subject. The interference which he recommends is simply that, in every case of abortion, the medical attendant should take care that nothing is left in the uterus, should completely remove placenta and membranes; and that in every case of threatened abortion, in which the hemorrhage is profuse and does not yield to treatment, the uterus should be emptied as soon as possible. The expulsion of the placenta should not be left to nature. In this recommendation there is of course nothing novel, nor has Dr. Spöndly any new instrument or method of effecting the desired end. The main importance and interest of the paper is in the fact that the author gives a series of fifty-three cases in which he acted on the principles which he lays down, and with uniformly good results.—*Med. Times and Gaz.*, April 12, 1884.

CHOLECYSTECTOMY FOR GALL-STONES.—DR. THOMAS SAVAGE reports a case of this operation, performed in 1883. The patient was a man of sedentary habits, who for years had been conscious of the possession of a liver. He had consulted an eminent specialist for such cases, who told him that he had a hydatid tumor connected with the liver, and that it should be punctured by aspiration as soon as possible, proposing himself to do it. When I was consulted, I at once found the presence of the tumor, and said that it was probably hydatid, but that it would be better to perform an abdominal section, and treat the tumor in the best way that was thought advisable when it was exposed to view. It was put before the patient as being an operation not less safe than aspiration, and yet more likely to be curative. This plan was agreed upon, and fourteen stones, varying in size were removed.

The tumor was about the size of a medium coker-nut, and was, in fact, a distended gall-bladder. On tapping it, the first two-thirds of the fluid was transparent and colorless, and a little viscid; the latter one-third was bile-tinged, in fact, appeared to be pure bile. I very much regret that the fluid was thrown away in the confusion of putting straight after the operation. It has been suggested to me, in explanation of the presence of these two fluids in one sac, that the colorless fluid might have been indeed hydatid, and was kept distinct from the true bile by a wall formed of the stones, which, on the collapse of the gall-bladder by the escape of the clear fluid, broke down, and allowed the bile above it to escape also. The appearance of, and the facets upon, the stones pointed to their having been in close contact before their removal.

This case is interesting in itself, but also more on account of its showing the inutility of advising aspiration, when a tumor can be directly treated under one's eye and touch. Here aspiration would not have been of the slightest use, and might have done much damage. Indeed, it would have been more risky than an abdominal section, as bile might without difficulty have escaped into the peritoneum; and, as a matter of fact, Murchison and others have reported a goodly number of cases of tapping followed by a fatal issue.

To prevent the future recurrence and dropsy of the gall-bladder, Langenbuch, in 1883, has recommended extirpation of the gall-bladder. Three of such operations appear to have been successfully performed. Langenbuch advises to begin by detaching the gall-bladder from the liver, and to tie the cystic duct.—*British Medical Journal*, March 8, 1884.

THE RADICAL CURE OF HERNIA BY THE METHOD OF DISSECTION.—At a recent meeting of the Academy of Medicine in Ireland, MR. KENDAL FRANK read a paper on this subject. The only two methods which seemed to him to give promise of extensive application in the future were (1) suture of the abdominal openings without removal or ligature of the sac; and (2) suture of the abdominal openings after excision of the sac. The first of these operation was applied to recent hernia before the sac had time to become enlarged and thickened. The method consisted essentially in cutting down on the tumor, carefully exposing the sac which had been returned into the abdomen, and then drawing together the openings by means of two or three sutures of stout silver wire, which should be left permanently in position. He advised that the skin should be drawn slightly upwards before the first incision was made, as by that means the skin would not lie directly over the wires. Thus union by first intention was promoted, and the permanent retention of the silver wire assisted. Three cases were related in which this method was employed.

MR. W. THORNLEY STOKER said there were two distinct classes of cases: the class in which operation was compulsory, where strangulation existed, and the class where operation was a matter of election to promote the patient's convenience rather than to save his life. In nearly all cases of operation for femoral hernia, a permanent cure had been effected; but in large inguinal ruptures a radical cure was not so frequent, and, in such cases, the peritoneum should be sutured. In the second class of cases, he advocated Wood's operation. He did not think it mattered much whether the pillars of the ring were drawn together or not. A cure was effected by the inflammation exciting the exudation of coagulum and lymph, which drew the parts together, thereby closing the opening as with a cork. He protested against leaving in the wire suture where the ring was sutured in inguinal hernia, as most unscientific and unsurgeonlike, and a possible source of future trouble.

MR. W. L. WHEELER mentioned the result of nine cases in which he had operated by different methods. In a case of inguinal hernia, on the left side of a male, he exposed the neck of the sac. He then drew it down and applied a ligature, divided the neck, and removed the sac below the ligature. This case was successful when seen two years afterwards. In a femoral hernia, on the left side, in a female aged eighteen, he opened the sac, pulled down, excised, and closed the edges, and the result, eighteen months afterwards, was most satisfactory. In cases in which the canal was greatly distended by a large hernia it would be almost impossible to have a radical cure follow any radical measure, and the most likely method was excision of the sac.

DR. MCARDLE observed that it was almost impossible to bring the edges sufficiently close together to keep behind the sac, and that the irritation of the veins was likely to produce phlebitis.—*British Medical Journal*, March 8, 1884.

PRIMARY EXTIRPATION OF THE ASTRAGALUS IN CASES OF IRREDUCIBLE DISLOCATION.—In a lecture published by the *Rev. Méd. de l'Est*, February, 1884, WEISS strongly advises to perform the operation at once when the bone cannot be reduced. The absence of an external wound is no contraindication, as the mortality, which was estimated at twenty-seven per cent. by Broca, has been lessened very materially by the introduction of the antiseptic treatment. In the author's own case (a simple irreducible dislocation outwards, with much inversion of the foot) the operation was difficult, and the wound did not heal for a long time; but after a few months the patient began to walk, and the result appeared to be quite satisfactory.—*London Medical Record*, March, 1884.

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RECENT VIEWS ON THE ORIGIN AND NATURE OF PNEUMONIA.

PERHAPS the most important subject considered at the recent Congress of German Physicians, sitting in Berlin, was pneumonia. The original paper was read by JUERGENSEN, of Tübingen, and the *confrère* to whom had been referred the consideration of the pneumonicoccus was FRAENKEL, of Berlin. The discussion was participated in by GERHARDT, of Würzburg, FRAENTZEL, of Berlin, RUEHLE, of Bonn, NOTHNAGEL, of Vienna, ROSENSTEIN, of Leyden, BAEUMLER, of Freiburg, and EDLEFSEN, of Kiel. At the same time, the results can scarcely be considered commensurate with the importance of the subject.

Within a few years past the views so long current as regards croupous pneumonia, that its cause is cold, its nature inflammatory, its initial symptom a chill, and its treatment antiphlogistic, have gradually given place in the minds of many to the idea that in croupous pneumonia we have an infectious disease. The natural difficulties in the way of substantiating such views have been diminished by the evidence which experimental pathology has furnished in the results of inoculation with the recently discovered micrococcus of pneumonia.

Closer examination has shown, too, that only four per cent. of the cases originate in exposure to cold, the remainder being doubtful or quite independent of it. Again, as to age, it was for a long time supposed that it attacked by preference the young and strong, but while statistics show that three-fifths of all cases occur from the first to the fourteenth year, the number of cases after forty-five is double that between fourteen and forty-four; and Jürgensen agrees with Flint in noting that it is the weak rather than the strong who are attacked by preference.

Jürgensen has also observed at Tübingen, at least, an interesting meteorological influence upon the occurrence of pneumonia, having noted that when the rainfall exceeded the mean, the cases were fewer, while an increase followed a fall below the mean—a relation to ground moisture similar to that so long observed in the case of typhoid fever. Edlefsen had observed the same relation at Kiel.

A further analogy to typhoid is observed in the effect of hygienic surroundings and peculiarities of its habitat upon the development of pneumonia, and Jürgensen called attention to the discovery by Emmerich, of the pneumonicoccus in the steerage of vessels. The question as to the contagiousness of pneumonia cannot, at present, be answered, it being very difficult to say of so widespread a disease, whether a case of apparent transmission is actually such, since it may depend upon certain coincident hygienic influences.

As to whether the poison of pneumonia is single or multiple, further information on this may be expected when the study of the microparasite is completed, but from a clinical study we dare only infer its unity, the striking variations in type and localization with which we are all familiar being in no way peculiar to it, but characteristic of all infectious diseases. The poison circulating in the blood has a special preference for the lungs and pleura, but it may manifest itself also in other situations, as is shown in cases in which the disease is ushered in by other symptoms, which give place at a later stage to those of pneumonia. Thus, Nauwerk found in the kidneys of thirteen cases dying of pneumonia, Friedländer's cocci, also incomplete zoöglea masses, in the veins; and Jürgensen discovered, in a case of pneumonia with cerebral symptoms, numerous cocci in the brain. Another peculiarity of the pneumonia poison is that its action is not gradual, as in typhus, but spasmodic, a special expression of this character being evinced in the temperature, which, in addition to the normal daily variations, exhibits numerous small variations throughout the day.

It is natural to expect that treatment should be modified to adapt it to such a view of pathogenesis. Hygiene, of course, acquires great importance, but, as yet, Jürgensen admits that treatment must, for the most part, be symptomatic. Iodine has been strongly recommended as an abortive measure, but he has had no experience with it. Especially is the heart to be watched, and an intermediate degree of antiphlogosis is recommended.

In the discussion which followed, Gerhardt ac-

cepted the views of Jürgensen as to the unity of pneumonia, and ascribed the so-called complications to a single poison operating diversely, as, for example, does the poison of scarlet fever. As to treatment, he, also, as well as Rühle, recommended the expectant and symptomatic method, with constant regard to the heart. In severe cases, he used quinine, and in high fever the cold bath, with simultaneous stimulation of the heart.

Fräntzel referred to the jaundice of pneumonia, a symptom imperfectly understood, which is sometimes accompanied by gastric symptoms, and at others not. He believed that the doubt regarding this symptom, especially in cases unaccompanied by gastric symptoms, was removed by the new views, since in these instances, at least, it might be regarded as hæmatogenous.

Rühle thought the infectious nature of pneumonia scarcely established because we dare not exclude altogether cold as an etiological factor. Rosenstein believed that pneumonia might be infectious, but not necessarily so; that it may be secondary to contracted kidney or to brain disease; and that treatment must vary according as the case is infectious or not. Jürgensen, however, thought these secondary pneumonias are not croupous.

Nothnagel cautioned against the too free use of alcohol, which he used only as a stimulant to the heart when it required it.

It is evident from the above that as yet little has been added to our knowledge of a proper treatment of croupous pneumonia, based upon the new views as to its pathology; while we are not certain that harm may not result from the unsettling of well-established principles of treatment. It is well known that, of late, the expectant plan of treatment of pneumonia has become quite general in some sections of this country. It is also well known that the mortality has increased during this period, rather than diminished. It is the belief, too, of men of large experience that some of the fatal cases would have terminated otherwise, if active antiphlogistic measures had been used; and we are ourselves inclined to believe that the expectant plan has been too generally followed, and that better results would have obtained if bloodletting were more common in this affection. It may be true, as Rosenstein suggested, that certain cases of pneumonia may be infectious, and others true inflammations, and that the treatment should differ accordingly. We do not, however, believe that the recognition of these differences of origin and nature is sufficiently easy to justify so complete an ignoring of antiphlogistic treatment. At any rate, the expectant and restorative plan is so invariably unsuccessful in grave cases that the antiphlogistic can scarcely be more so, and we recommend a more general return to it.

DR. GROSS'S PAPER UPON LACERATIONS OF THE FEMALE SEXUAL ORGANS.

Our readers will be glad to have presented them the very remarkable paper prepared by the late Dr. Gross, for the Obstetric Section of the American Medical Association, and, by his own arrangement, now published in full in The Medical News. The paper is of great interest as the last contribution of its distinguished author to medical literature; shortly after its completion, there came the weary weeks of physical prostration and pain, ending in death. There seems something almost sacred in this final work of one of the greatest men of the age, one to whom American medicine is most deeply indebted among her sons in the present century; it is not to be treated with irreverent pen, a jest would seem very profanity. It is a paper the full meaning of which cannot be had unless by careful reading and reflection.

We understand by it, in the first place, that the author had faith in the wisdom and goodness of nature, and then that it seemed to him these were being thwarted when so many women in the exercise of the reproductive function suffered such serious injuries as the gynecologist declares. Admitting the facts, they must result from bad obstetric management, from doing wrong things, and from failing to do right things.

But we think that the facts have been by some multiplied and exaggerated. For example, genito-urinary fistulæ are rare, and, so far as our observation teaches us, are of much more frequent occurrence in the practice of midwives than of physicians. These accidents may be apparently more frequent to-day than in the time of Dewees, simply because now they are cured, thanks to the patient genius of Marion Sims, and they become known; for in every State, nay, in almost every county of every State, there are surgeons capable of curing at least the great majority of cases, while formerly these unfortunate sufferers hid their infirmity by utter seclusion. So, too, in reference to the graver forms of perineal tears; for little more than a quarter of a century has passed since the late Prof. Meigs asserted them as incurable, and therefore sufferers would naturally shrink from revealing their unfortunate condition, since no good could come from the revelation.

Further, it is needless for us to repeat what has been so recently stated in our columns as to lacerations of the cervix in labor; they are, in the great majority of cases, simply physiological tears, not pathological in origin or in consequences, and, therefore, only exceptionally demanding or even excusing operative interference; that the parous os and cervix are to be brought back by a plastic operation to the condition of the virgin os and cervix, is a vagary which must finally cease.

But, taking the view which Dr. Gross adopted

from some leading gynecologists, there must be causes for these great evils, and means for preventing their occurrence. One cause for some of these undoubtedly, as stated by Dr. Gross, is the indiscreet, unnecessary use of the obstetric forceps. He has not uttered a single word in censure of this practice which will not meet the cordial endorsement of all thoughtful members of the profession; following his advice, many injuries, more especially to the perineum and to the external organs of generation, may be prevented.

But then, further, he advised bleeding in rigidity of the perineum, or of the os uteri; and if serious injuries to these structures are as frequent as represented—injuries that occur in spite of our morphia, chloral, and anæsthetic inhalations—by all means let us heed the words, and obey the teaching of our great master. The majority of the profession would agree in the advice, given by Dr. Gross, that bleeding is of value in threatened convulsions in pregnant women, though they might not regard the remedy as essential in all cases. While Dr. Gross stated other conditions in which he advised bleeding in pregnancy, in which few would be willing to follow the advice, unless very exceptionally, as, for example, in threatened miscarriage, yet the general lessons of his paper will be found more valuable the more they are studied.

GOVERNMENT REGULATION OF PROSTITUTION.

As from time to time the question of licensing houses of prostitution is discussed in this country, with the hope that by such action, with medical inspection of the inmates, the spread of venereal diseases may be checked, the latest facts in regard to the results of this plan are of interest. These are found in a volume published last year in Paris, upon "Prostitution in France," its author, Dr. Armand Després, having collected valuable statistics, and presented some important conclusions, the most valuable of which is that the more prostitution is subjected to regulations, the more prostitution is increased. Government control adds to rather than lessens the social evil.

Another conclusion is that where such regulation exists marriages are delayed, and the rate of increase of population falls most frequently to the minimum.

According to Dr. Després, there has been for years a steady depopulation of France, to be attributed indirectly to prostitution. The excess of births over deaths was only three per cent. in 1872, and in 1877 but one and three-fourths per cent. The facts and conclusions of Dr. Després are of very great importance and interest to the moralist as well as to the physician. Certainly they very clearly show that government regulation of prostitution is not an undoubted good.

Instead, therefore, of seeking to lessen venereal diseases by licensing houses of prostitution and subjecting their inmates to regular examinations, would it not be better, as suggested by our author, to make the communication of such malady a crime which, when knowingly committed, shall be punished by imprisonment of from six months to two years? Where the party communicating the disease was ignorant of the liability to do so, damages only would be required. But the court should at once compel these diseased persons, who were incapable of comprehending the danger they bore to others, to enter a hospital, where they should be required to stay until a medical examination showed that they were cured of all contagious accidents.

It is doubtful whether public sentiment in this country will ever permit legislation regulating prostitution in any way. Nevertheless there can be no question as to the urgent necessity of taking steps to prevent the spread of venereal diseases. Even if legalizing houses of prostitution were permitted, the disastrous results of such legislation, as ascertained in France, give no hope that it would effect the object in view, and therefore it would not be permanent. Possibly the plan of Dr. Després may be the best to lessen alike prostitution and venereal diseases. Certainly the question commends itself to the calm consideration of all thoughtful, conscientious, and philanthropic men, whether physicians or not.

PREGNANCY AND TYPHOID FEVER.

In a recent Paris thesis the reciprocal relations of pregnancy and typhoid fever are discussed. The author, Dr. Savidan, does not consider the prognosis in regard to the fever as materially affected by the pregnant condition, but in two-thirds of pregnant women abortion is caused by the fever, and he attributes the injurious result to the action of the typhoid poison upon the uterus, increasing its irritability, and upon the fœtus, killing it by the poison directly, or by hyperthermia. We doubt if professional experience in this country will confirm the alleged great liability to abortion caused by typhoid fever occurring in pregnancy. Personal observation leads us to put the percentum of abortion, or of premature labor, much lower.

In our issue of this and the preceding two weeks we have given in extra pages the equivalent of a whole number of The News, in order to promptly place before our readers full reports of the interesting annual meetings of the several national medical societies which have just been held.

SOCIETY PROCEEDINGS.

THE AMERICAN MEDICAL ASSOCIATION.

Thirty-fifth Annual Meeting, held at Washington, May 6, 7, 8, and 9, 1884.

(Specially reported for THE MEDICAL NEWS.)

SECTIONS.

SECTION ON OBSETRICS AND DISEASES OF WOMEN.

WEDNESDAY, MAY 7TH—SECOND DAY.

DR. THEOPHILUS PARVIN, of Pa., read a paper on

PUERPERAL SEPTICÆMIA,

in which he showed that the above title limited the disease to the condition in life peculiar to the female, and mentioned the physical, moral, and mechanical causes which are supposed to originate it. The causes are by some divided into autogenetic and heterogenetic; the former being a self-created poison endangering life. The autogenetic theory is a confession of ignorance. Scarlatina is never held to be autogenetic, although it may arise and be developed without apparent cause. By the theory of heterogenesis, woman enjoys greater safety. In sporadic cases of the disease the symptoms are the same as in those arising from assignable causes. Some well-known causes of the disease are found when it occurs after contact with the poisons of the cadaver, of epidemic erysipelas, or malignant uterine diseases, conveyed from the diseased to the susceptible patient, or from the miasms of the cesspool or the emanations of sewer gas.

Dr. Parvin related the occurrence of the disease in a patient in whom a retained placenta had been removed in fragments and incompletely. On the third day fever, sweats, and abdominal tenderness gave evidence of the affection, and the spread of the same disease to two neighboring patients showed its dangers. As in epidemics of scarlet fever the symptoms may be mild or severe, the intensity depending on the amount of the poison, the parts affected, the avenues of absorption, and the vital resistance of the subject. Its contagious powers have been demonstrated, and cannot be denied. Most obstetricians accept its cause as parasitic. To this effect we have the authority of Delore, Charpentier, Kleinmächter, as well as Spiegelberg, who shows it to be due to spherical bacteria. Milk fever is but a mild form of the affection, and the influence of microbes is also shown in phlegmasia alba dolens. Delore, 1869, Orth, 1872, and Heiberg, 1873, found the parasites with the exudations, and the last observer traced them into the lymphatics, and with them he produced the disease. Microbes, we know, act indirectly through a solution of septic products. During the first three months of the year's attendance at the Philadelphia Hospital in a total number of 72 women he had 20 cases of septicæmia and 3 deaths. This he accounts for in the bad hygienic conditions of the lying-in wards.

The author read some illustrative cases. One of a young colored woman, in which labor lasted twenty-four hours, the presentation being pelvic. On the fourteenth day after delivery, fever, pain, and symptoms of peritonitis announced the disease. *The patient did not have a chill;* death resulted on the seventh day. A *post-mortem* examination, made by Dr. Shakespeare, disclosed a general peritonitis, pleurisy, and pneumonia. The temperature at its maximum was but 103⅘° Fahr.

A second case was that of a patient who had had a good labor; she was seized on the third day with fever and delirium, *but no chill.* The uterus was tender, the temperature 105.3°, and death occurred on the fifth day of the disease. The autopsy made by Dr. Formad showed the lungs in an inflamed state and full of altered blood. The heart was soft, the muscles friable, and symptoms of a recent non-purulent peritonitis without exudation were present, whilst the mesenteric glands were much enlarged and full of cheesy infarctions. The size of the uterus was increased, its mucous membrane inflamed, and showing in parts commencing gangrene. The liver was that of acute yellow atrophy; the spleen was disintegrated, and the kidney softened.

Another case was that of a multiparous woman of twenty-four. It was a left shoulder presentation. The course of the labor was delayed by the accidental absence of the accoucheur. Podalic version was performed and a dead child delivered. By digital examination a vesico-vaginal slough was discovered on the second day. The patient had suppression of urine, irritable stomach, chills, fever, diarrhœa, and a foul lochial discharge. Death ensued on the eighth day. The examination after death, made by Dr. Shakespeare, disclosed peritoneal inflammation; uterus enlarged more than normally, its interior lining inflamed and partly gangrenous; and on the right side a rupture of the cervix and lower portion of the uterine body. The rupture was without indicative symptoms, an occurrence, as stated by Hervieux, as not infrequent.

Of seventeen cases which recovered, some had and some did not have chills. The secretion of milk was lessened or absent, whilst three constant symptoms prevailed: fever, painful abdomen, and arrested involution of the uterus. The highest rise of temperature noted was 106° F. The treatment was supportive, antiseptic, and antipyretic with uterine injections of carbolic acid solution or that of corrosive sublimate, 1 to 2000.

DR. SEYMOUR, of Troy, N. Y., mentioned an article in the April number of the *American Journal of Obstetrics*, in which he recorded the histories of two cases of the disease. In one it was associated with a traumatic hæmatoma of the right broad ligament, which suppurating, the patient died. The other was associated with a laceration of the supravaginal portion of the cervix on the right side. The uterus was washed out twice a day. In the beginning of the treatment a chill followed the injection, but this was subsequently avoided by the administration of twenty grains of quinine a short time previous to the introduction of the local antiseptic fluid. He thinks that his two cases will explain some of the conditions in cases in which examinations are not made.

DR. ROBERTSON, of South Carolina, has never seen a case of puerperal septicæmia in a negress during a practice of forty years.

DR. R. S. SUTTON, of Pittsburg, said that in obstetric practice he had served his day, and the sentiments expressed in the paper accorded with his own views. The disease is always perhaps due to a poison *sui generis*, and the autogenetic theory is but a confession of ignorance. Personal cleanliness is of prime importance,

and especially as regards the physician's hands. It is a precaution that all can take. The under surface of the tips of the finger-nails must be clean; the hands washed in turpentine and an alkaline solution.

Dr. Parvin, in reply to an inquiry, closed the discussion by saying that the antiseptics which he has used are two: carbolic acid and the corrosive sublimate. The experience of last winter led him to reject the use of vaginal injections, as the frequency of occurrence of the septicæmia was not thereby diminished, but in a certain number of cases it seemed to occur even more frequently. In septicæmia with fetid uterine discharge the intrauterine injections are indicated.

Dr. Wm. H. Taylor, of Ohio, read a paper on

THE MANAGEMENT OF PROTRACTED LABOR.

He limited his considerations to the conditions in the earlier stages of the process. He is justified in bringing up the subject by a quotation from Dr. I. E. Taylor on the neglect that the matter has received. The author thinks that rupture of the membrane should fix the close of the first stage. In the first stage the danger is exhaustion from pain, and the inhibition of labor by nerves of cerebral origin (*Lusk*).

Heretofore, active interference, he said, has been almost exclusively limited to the period after full dilatation of the os or even engagement of the head; but is not true conservatism to avert danger rather than be driven by some bad condition of the woman to a last resort? A commonly asserted cause of delay is "a rigid os." That such a state exists *per se* he doubts. Proper uterine contraction will be accompanied by appropriate changes of tissue of the cervix and os, and delay in labor attributed to a resisting os which is really due to insufficient uterine action, and local means resorted to, to dilate the os, are efficient from exciting uterine effort; spasmodic contraction of the os from fissure, too early rupture of the membranes, etc., may resist the powerful efforts of the uterus for a long time. While all are familiar with the symptoms of excess of liquor amnii, we rarely see notice of the effects of too little fluid; in such a case, Skene says: "A tense condition of the membranes may prevent bulging of the bag of waters, and the membranes may appear to the touch as if stretched across the os, or the head lies close down over the os uteri," and Dr. Taylor adds, a small uterine tumor, with the intestinal resonance, reaching close up to the solid mass. In protracted labor, if the head be not easily compressed, nothing will be gained by waiting, and he urged the adoption of version far earlier than is usually done. In the case under consideration, the head above the brim and the membranes unruptured, we have the conditions which make version easy and safe, and allow its performance before the woman is exhausted by long-continued suffering, and for the child we now have only the dangers of a breech delivery, which are less than an unaided delivery through a contracted pelvis. He rates it as the most valuable treatment.

Poverty and bad hygiene of cities are causes of the common pelvic malformations and of retarded labor. In the first stage ether, opium, Barnes's or Skene's dilator, and the forceps to bring the head into the cervix, may be required. Slight contraction of the brim is difficult to recognize. If the head be compressible, it may be permitted to wait. In early version with membranes unruptured the danger is less, and to the child only that of a breech delivery. He concurs with Johnson, of Dublin, in the early use of the forceps after rupture has prematurely occurred and pressure resulting. The view of Fritsch, that craniotomy should be done when pressure has long continued and there is no liquor amnii, because of the presumptive death of the child, will meet with little approbation in America.

Dr. Isaac E. Taylor, of New York, spoke of the gentle use of his forceps to bring the head in relation to the neck when digital dilatation, or dilatation by Barnes's method, is objected to. The use in such cases is a conservative principle.

Dr. A. Reeves Jackson, of Illinois, then read

A CONTRIBUTION TO THE RELATIONS OF OVULATION AND MENSTRUATION.

The aim of scientific investigations, he said, is the attainment of truth, and arguments to be successful must be based on known facts. After giving a short record of the dates and names of the early observers on the condition of the bodies first described by De Graaf, whose name they bear, the author continued to say that Baer, in 1827, by discovering that the follicle was not the ovule, but only the surrounding structure, laid the basis of the ovular theory of menstruation. Negrier, Barry, Fouchet, and others later on, showed that menstruation is due to ovulation. The theory became generally accepted because it seemed so reasonable, yet the author does not believe that all the facts have been fully observed or rightly explained. Ovulation and menstruation may be independent of each other. Malpighi saw the follicles developed in the fœtus and De Graaf the same in children. All obstetric writers admit that conception may occur without menstruation. A number of cases were quoted in which from eight to twelve children were born, the mothers not menstruating during the whole time. Yet arguments based on such facts are not satisfactory, since conception seems the preventive cause. Scanzoni admits that the Graafian follicles enlarge during pregnancy, and Meyhofer thinks this enlargement returns monthly during the period of gestation. Cases in which autopsies were made affirm these views. In a woman who had never menstruated, and who died at the age of seventy-eight, many false corpora lutea were found. Menstruation may occur without ovulation, as reported, in the cases of Gerhardt, Stedman, Senatri, and Meadows. Prof. Leypoldt has made a valuable contribution to the subject by his examination of the ovaries of thirty-two subjects in whom the date of the last menstruation had been fixed.

The author does not think that the point in dispute has yet been settled, but believes that Leypoldt shows that the Graafian follicles may rupture at any time without the occurrence of menstruation. He maintains, in conclusion, that there is no connection between the two but a mere coincidence.

Dr. H. F. Campbell, of Georgia, was pleased to find his views confirmed by the author. He, too, does not think that the two processes are to each other as cause and effect, but are independent. He thinks that after oöphorectomy menstruation is rather increased than diminished. He mentioned a case of Dr. Emmet, in which it continued for eighteen months afterwards, and

one of Dr. Engelmann of three years. The "egg-making" and the "nest-making" apparatus have also a distinct blood-supply. In another instance, after castration, the menstrual flow was so profuse that hæmostatics were needed. Puberty, with its signs, has a special purpose; it is to grow a womb and fecundated ovum. If favorable conditions do not exist, menstruation—a waste—ensues.

Dr. G. J. Engelmann, of St. Louis, thought that the above views tend too far in one direction. He has examined many menstruating uteri and finds the ovule to have burst within from the first to the third day of menstruation. He holds the two processes to be coexistent, but not dependent. The purpose of the uterine congestion is to thicken the mucous membrane and prepare a bed for the ovule. If impregnation does not follow, a flow of blood relieves the state of congestion and carries away with it the superabundant tissue.

As a rule, if one function be disturbed the other is also likely to be so. We are yet ignorant of the full facts. In a case in which he thought he had carefully removed the ovaries and all their tissues, conception followed in three years. In a similar case he thinks some ovarian tissue was left. In answer to a question, Dr. Engelmann said he has never heard of or seen a third ovary.

Dr. Healy, of Maryland, called attention to the fact known to sportsmen that the spaying a bitch after rutting has occurred fails of its purpose, and she is still followed by other dogs. He thinks it due to the establishment of a bodily habit, and points out the interest that would be attached to the case of castration in a subject who has never menstruated.

Dr. Robert Battey, of Georgia, thought that the discussion of the subject of menstruation is one in which opponents do not use the term in a common sense. Menstruation may occur in a child of four, a woman of twenty-five, and one of ninety-two. The one is true, the others pseudo-menstruation. Ovulation is not necessary to either, and in pseudo-menstruation the presence of Fallopian tubes, vagina, uterus, or vulva, is not essential for the occurrence. He holds that Dr. Campbell's views can be carried still further, and he asserts that sterility does not even follow after extirpation of the ovaries. He mentioned an instance of conception in which double ovariotomy had been done two years previously.

Dr. Jackson, in concluding the discussion, gave his definitions of ovulation as the ripening and extrusion of an ovule, and of menstruation, a sanguineous flow from the mucous membrane of the uterus. He does not think we can speak of a false menstruation because it occurs in a child or old woman. He has seen menstruation where only the cervix had been left after operation.

Dr. J. Herbert Claiborne, of Va., read a paper on

THE USE OF CHLOROFORM IN LABOR.

His conclusions are founded on two hundred cases in private practice. He thinks the anæsthetic is not used enough, and gives the following as his conclusions: 1. The process of labor in all its stages is facilitated by chloroform. 2. The duration of all its stages is shortened. 3. The pain of all the stages is entirely and safely blunted. 4. The occurrence of accidents is less frequent.

In opposition to his views he quoted the opinions of others as expressed in Playfair's text-book, in which it is to be used only during the second stage, and the dangers of post-partum hemorrhage is insisted upon. His own views were once identical with these, but he now wished to make a public recantation. He described the sufferings of the woman and the great blessing which she found in the anæsthetic. In exceptional cases, in which there is little or no pain, he does not think it necessary. In the first stage chloroform need only be given during the pains and not in quantities sufficient to produce unconsciousness. In a stubborn and undilated os chloroform relaxes the circular fibres and dilatation ensues. In the pains of descent and in the last severe agony the author's feelings impel to its use. He has not seen labor delayed or arrested. In only one instance was the perineum ruptured, and then as the result of the unskilful use of the forceps.

To show the influence of an anæsthetic on labor, he related the history of a woman who, upon some one's advice, became intoxicated just before her confinement, from the effects of half a pint of whiskey. In six hours every stage of labor was completed, yet during all this time there was no other manifestation of life from the mother. In the third stage he believes it increases uterine contraction and diminishes the risk of hemorrhage. Chloroform is the sheet-anchor in puerperal convulsions. As to its action in retained placenta and hour-glass contractions, he has had no experience. In instrumental and manual interference it is imperatively demanded. He used the chloroform prepared by Squibb—it is more rapid, certain, and agreeable than ether, whilst it does not possess its stimulating or intoxicating effects. In answer to an inquiry, the author replied that he has seen no bad effects on the fœtus from its use.

Dr. Jepson, of W. Va., has been more and more impressed by the frequency of short and easy labors; he has not observed the agony and suffering of which the author spoke. He found that chloroform induces hemorrhage by lessening the uterine contraction. He limits its use to instrumental deliveries or unusual suffering. In the majority of cases he lets nature do her perfect work.

Dr. A. Dunlap, of Ohio, made some remarks on

AN IMPROVED METHOD OF TREATING THE PEDICLE IN THE REMOVAL OF LARGE INTRAPERITONEAL FIBROID TUMORS.

In the removal of these tumors, a successful treatment of the pedicle is necessary to make the operation legitimate. He is satisfied that the pedicle after ovariotomy does not slough, but becomes revitalized. He has invented a clamp and self-threading needles, by which the pedicle is so secured that no hemorrhage occurs, and there is no laceration or injury to the peritoneum covering the stalk; the sutures and the divisions are both practised on the proximate side of the clamp.

THURSDAY, MAY 8TH—THIRD DAY.

Dr. Isaac E. Taylor, of New York, read a paper on

THE MANAGEMENT AND RECTIFICATION OF THE CHILD'S HEAD IN DIFFICULT CASES OF OCCIPITO-POSTERIOR PRESENTATION.

He gave a summary of the important views on the cranial position since the subject was treated by Naegele,

Sr., in 1819, the natural mechanism of the presentation, and the methods of treatment. He next considered the theories explaining rotation of the head. He holds that the movements of the child's head is explained by the action of the uterine forces on the vertex. The uterine action must coincide with the uterine axis. In some cases he has seen rotation occur in the intervals of contractions. He thinks face presentations are accompanied with no more dangers than are occipito-anterior. Should the perineum be much distended, and the head unable to escape from under the pubis, artificial aid is needed.

For rotation to occur in some difficult cases it is essential that the shoulder enter the superior strait, and rotation of the head and shoulder to coincide. In the use of the forceps he pointed out the necessity between consonance of action in their use, and natural rotation. Traction, too, may cause serious injury. When forceps fail, manual aid is needed. The hand is the natural and essential means. We may either move the position of the head or make it a face presentation. Conjoined manipulation is of great value. The literature of the subject, and his own experience justify him in proposing the applicability of converting some of these cases into face presentations.

A paper on the

CAUSES AND PREVENTION OF LACERATIONS OF THE FEMALE SEXUAL ORGANS,

by the late Dr. S. D. Gross, of Philadelphia, was read by Dr. S. C. Busey, of Washington, D. C. (see page 599).

Dr. Battey, of Georgia, said that he has never regretted the use of the lancet; he does regret that he has not used it more boldly.

Dr. Campbell, of Georgia, remarked that he was glad that his views were consonant with those of Dr. Gross and Dr. Battey. Bloodletting in labor and in eclampsia has been unjustly condemned and laid aside. As substitutes we have chloroform, chloral, potassium bromide, and cold to the head. If puerperal convulsions be due to anæmia of the brain, why give such exsanguinating remedies as these? If, however, uræmia be their cause, then the presence of urea is due to renal congestion. Then we should bleed to bring about healthy elimination from the kidneys. An experiment he performed on a common fowl, makes him question the statement that bleeding will produce convulsions. For having cut all the tissues through down to the cervical cord in front, the bird died without a struggle.

Dr. T. B. Harvey, of Indianapolis, with the utmost respect and honor for the great author, thought the subject should be freely discussed. He thinks the other side ought to have an expression of opinion. He began to bleed because of the teachings of Dewees, but he now obtains better results from chloroform and opium.

Dr. R. S. Kinloch, of South Carolina, was anticipated in some of his remarks by Dr. Harvey. Dr. Gross is an illustration of the power of early impressions. He disagreed entirely with the statements made in the paper. He has never bled in a practice of thirty-five years, and has lost but two cases dependent on the parturient state. Would Dr. Gross have applied the same rule to surgical cases? The effects claimed are *post hoc*, and not *propter hoc*.

Dr. Seymour, of Troy, N. Y., thinks the locality of importance in the good results from venesection. In Vienna it has been shown that bleeding is not necessary in the treatment of puerperal convulsions.

Dr. T. A. Reamy, of Ohio, said that, whilst mourning the death of the great man, his paper should stand on the same ground as if he were living. Hence, he could not let the article go on record unchallenged. In advocating "bleeding for fever," he does not make the distinction that the febrile state may be but the storm produced by sepsis. Why lessen the quantity of the blood when physiology and Scripture teach that it is "the life thereof." For a rigid os and nagging pain, the rationalist would give chloral or morphia; or, if the pulse be high, an arterial sedative. In only a few cases of puerperal convulsions is bleeding best. Especially will these be few after one has once seen the effects of morphia. No doubt the forceps are used too frequently by some, but the remarks of Dr. Gross cannot apply to the light and elegant forceps of modern times. The present student uses the instrument better after practice of two years than did the average practitioner of twenty years ago. Recent works have made the subject plain. The forceps is not used more than once in fifteen or twenty-five cases.

Dr. Wathen, of Kentucky, thought that chloral and chloroform deplete the brain less than bleeding does. He has never seen a case in which fever or abortion could be benefited by it. It is applicable in puerperal eclampsia, where excess of the blood in the brain may be fatal. All of the woman's blood is needed to sustain the puerperal condition properly. He thought the Society should not adopt so pernicious a doctrine until it had been well considered.

Dr. W. M. Findley, of Ohio, then read a paper on

THE RATE AND CAUSE OF MORTALITY IN ONE THOUSAND CASES OF LABOR IN PRIVATE PRACTICE.

The fatal result in some of the cases he accounted for by the wretched condition of the patients, and the time that elapsed before assistance could be given.

Dr. Wm. T. Lusk, of New York, read a paper on

SUDDEN DEATH IN LABOR AND CHILDBED.

He was called to patient on the first of January, 1884, at 6 A.M. She had been in the erect posture for hours. She did not wish the forceps to be used. At 1 P.M. her face was colorless, but there were no symptoms of suffering and an anæsthetic was given. A child was delivered by means of the forceps. As was anticipated, hemorrhage occurred, and was arrested by hot-water injections after a few pints of blood had been lost. The patient had all the appearances of severe shock, and died at 7.30 P.M. He considered the causes of sudden death resulting from pulmonary embolism and air in the veins, and illustrated his remarks by the histories of cases and the results of autopsies. He considered, therefore, death as resulting from nerve exhaustion or shock, and in which neither air-bubbles nor embolisms are found. Pathology teaches shock to be due to reflex paralysis, especially of the splanchnic nerves. The causes predisposing to severe shock are well known in military surgery, and it would be singular could not similar conditions prevail in childbed. In the process of labor the torture is as great as that which victims of justice once suffered, in whom, as is well known, *shock*

often put an end to the agony. He insisted, in conclusion, on the dangers of a prolonged first stage when the membranes are unruptured.

Dr. B. B. Browne, of Maryland, then read a paper on

MALFORMATIONS IN THE FEMALE SEXUAL ORGANS RESULTING FROM ARREST OF DEVELOPMENT.

Case I.—A small female, who never menstruated. The external genitals were well developed, the vagina ending in a cul-de-sac one and one-quarter inch long. Neither uterus nor ovaries could be detected.

Case II.—A. R. Had periodical headaches, and had never menstruated. External genitals normal, hymen intact when cut, and infantile cervix perceived. Electricity was used once a week; the patient menstruated, and the uterus developed.

Case III.—M. T., aged nineteen. Had never menstruated; she had monthly pains in the head, relieved by epistaxis. The uterus was small, the cervix nipple-shaped, and the os permitting the passage of a probe. Cured by electricity.

Case IV.—Autopsy of a female aged nineteen; had never menstruated; vulva natural, vagina ending in cul-de-sac three inches deep, no rugæ on surface. Bladder and rectum adherent; ovary, uterus, and Fallopian tube of the size of an apricot.

Case V.—A. T., aged thirty-two. Had never menstruated; was well developed. There was intense sexual desire. Vagina ending in cul-de-sac two inches deep. The finger met an elevation—the rudimentary uterus—on the right side.

The author's conclusions are: 1. Malformations before puberty are due to arrest of development. 2. The ovary is developed with the uterus. 3. The external genital organs are developed independently of the internal. 4. The patulous urethra found is due to an arrest of development, and not to sexual intercourse. 5. In congenital atresia a patulous vagina is the rule, not in the acquired.

The following papers were read by title: *On a New Suture*, by Dr. S. C. Dudley, of Illinois; *Mechanical Methods and Appliances in Uterine Dislocations and Distortions*, by Dr. H. F. Campbell, of Georgia; *Surgical Operations for Cancer of the Uterus*, by Dr. W. H. Byford, of Chicago.

Section on Surgery and Anatomy.

Wednesday, May 7th—Second Day.

The first order of procedure was the discussion on the paper of Dr. F. S. Dennis, of New York, on the

TREATMENT OF COMPOUND FRACTURES.

Dr. Quimby, of New Jersey, remarked that in all compound fractures it is highly important that all sharp fragments of bone be removed in order to prevent their irritating action on the wound. In speaking of Listerism, he called attention to the fact that even with the use of all the antiseptic measures of that system, bacteria have been seen to thrive.

Dr. T. R. Varick, of Jersey City, then read a paper on

RAILROAD INJURIES OF THE EXTREMITIES, WITH OBSERVATIONS ON THE SITE OF AMPUTATION, AND SUBSEQUENT TREATMENT OF THE STUMP.

He considered injuries to the extremities not only when the result of railroad accidents, but also when inflicted by any crushing blows at great momentum. He spoke first of the increasing frequency of these injuries, with the increasing use of heavy machinery. Owing to the great weight and high rate of speed, injuries inflicted by trains in transit are of a most destructive character. The traumatism is not confined to the immediate part struck. The appearance of the integument is not always a criterion of the condition of subjacent parts, as there may not be the slightest abrasion thereon, and yet the underlying muscle and vascular systems may be hopelessly destroyed. In reference to the *modus operandi* of a force acting in this manner, the author gave this explanation: We know that a muscle may be ruptured by its own contractile force, especially when taken by surprise, or in an awkward position when struck. The effect of blows in producing muscular contraction was illustrated by the patellar tendon-reflex. The same phenomenon follows a blow upon the tendo Achillis with the foot firmly flexed. Since Gowers has shown that this contraction followed the blow too quickly to admit of the stimulus travelling to the spinal cord and down again, the movement must be due directly to the stimulation of the muscles themselves. A blow upon a muscle held in extreme tension causes violent and repeated contraction, and in a case in which great momentum inflicts the blow, it is fair to assume that rupture of the contracting muscle or its tendon to a greater or less extent may ensue. In railroad injuries, the involuntary contraction in conjunction with the efforts of the victim to free himself, would produce some of the lesions which come under our observation. Again, the liquids of the body are confined within strong tegumentary and fascial coverings, blows rupture these envelopes in many places, pulpify and comminute the tissues beneath and eject the fluids to a distance, it may be, into other tissues; and the lymph and blood are thrown back through the large vessels with the momentum of the blow struck. This force, the author said, is received on the one hand by the right side of the heart, and may result in a fatal paralysis. He considers the rupture of vessels a fortunate occurrence, as relieving this tension. On the other hand, the blood flowing from the arterial side of the heart is also suddenly arrested.

In speaking of the site of amputation, the author said that he had made it a rule to give the point of injury a wide berth, since he had found that, no matter how skilful the operation, if it did not go beyond the contused part of the limb, sloughing of the stump occurred. This sloughing, too, involves not only the integument, but the connective and muscular tissues in some cases, the muscles sloughing even more than the integument. It matters little what method of operating is employed. The author, however, referred to a number of important points in the general care of the limb before and after the operation, including its dressing with proper antiseptic precautions. The importance of a large drainage-tube was insisted upon. Conservative surgery was recommended in all injuries of the hand and foot, amputation being avoided in most cases.

Several cases were reported illustrating the severity of injuries, the dangers and complications that may ensue, and the best methods of treatment. That the treatment was a successful one, the author supported by statistics, showing that of twenty-one major amputations made by him, all recovered, and of five other major

amputations he had but one death, and that, due to secondary hemorrhage, on the fourth day, in a debilitated patient. In conclusion, the author epitomized his treatment thus: Amputate through sound tissue, and keep the stump clean.

DR. QUIMBY thought it was a great mistake, and one too often made by physicians, to think that because a railroad injury caused no immediate severe symptoms, the time of danger was passed. Cases were referred to in support of the statement.

The committee appointed to draft

RESOLUTIONS ON THE DEATH OF DR. S. D. GROSS

reported the following:

Resolved, That the Surgical Section of the American Medical Association have received with a sense of profound regret the intelligence of the death of Samuel D. Gross, of the State of Pennsylvania, one of the greatest ornaments of this Association, and one of the most distinguished teachers and authors in the medical profession of the United States.

Resolved, That the memory of the deceased deserves to be cherished with love and veneration by the members of the profession. As a man thoroughly versed in the medical science, he is worthy to be ranked with the greatest and ablest of our age and country. He had mastered the vast learning of his profession, and the natural kindness of his great and generous heart was such that throughout his long and successful career as a practitioner he was continually experiencing the most intense satisfaction in relieving, by his science, the sufferings of humanity.

Resolved, That a copy of the resolutions be printed in connection with the record of the transactions of the Section, and that a copy should be transmitted to the friends of the deceased.

The paper of DR. CHARLES A. LEALE, of New York, *Tracheotomy in Diphtheria*, was read by title.

SPONTANEOUS FRACTURE OF VESICAL CALCULI.

DR. J. W. S. GOULEY, of New York, presented a specimen of a calculus which had undergone what is usually known as spontaneous fracture within the bladder. The question, he said, is whether spontaneous fracture ever occurs, and if so, how; if not, what the phenomenon truly was. The specimen presented consisted of eighteen or twenty fragments of various sizes and shapes, and the speaker did not doubt that a considerable number of similar pieces had escaped by the urethra. This detritus came from a patient seventy-nine years of age, who had been under treatment for some obscure vesical trouble for a year or more, and into whose bladder sundry instruments, soft and metallic, had been introduced. About two years after first noticing the trouble, he fell into the hands of a physician of this city, who dilated the urethra somewhat and discovered a stone. After the sound had been used for a week or two, the patient passed several fragments from the urethra. The patient had probably some, but not great, hypertrophy of the prostate, or the fragments could not have passed. On several occasions he passed other fragments, and the rest of the small fragments were removed by aspiration. Some time after this, the patient was submitted to an operation, after which he did not long survive. The speaker believed it a case of what is known as spontaneous fracture. The stones were all smooth, but did not present any regular facets. The fracture had evidently occurred some time, probably months, before the passage of the fragments.

In regard to the question, How does this phenomenon occur? the speaker said that he thought the best explanation he could give for it, since so little is said of it in the text-books, was that the fracture was similar in occurrence to that which occurs in Prince Rupert's pearls. He thought it probable that a vesical calculus might, like these little drops of glass, be very hard and smooth, and yet, if scratched to never so slight a degree, fly to pieces. He thought it not at all unlikely that the instruments introduced so frequently might have produced a slight erosion, causing the fracture.

DR. L. A. SAYRE inquired whether the speaker had had an opportunity to examine the patient before the time of operation, and whether he could state anything in regard to the size of the stone before fracture.

DR. GOULEY replied that the stone had been broken long before the operation occurred, and before he first saw him.

DR. J. FORD THOMPSON, of Washington, reported that he had performed a lithotomy in which he found a fractured stone. He had introduced sounds, and had attempted to crush the stone by Bigelow's method, but the bladder was so contracted that he found it impossible to separate the blades of the instrument far enough to get even the smallest fragment into it. He was positive, therefore, that he had not caused the fracture of the calculus with it. After operating, he extracted five stones, each much larger than any of those presented by Dr. Gouley. He believed, however, that he must have broken the stone in extracting it, for it was rather soft, and he did not consider it a spontaneous fracture, yet he thought it possible that the firm contraction of the bladder might have caused the fracture. The case terminated very much as did the case of Dr. Gouley.

DR. HUTCHISON, of Brooklyn, presented a mulberry calculus which he had removed a year ago from a young man of twenty. After recognizing the condition in the usual examination, he had performed the bilateral operation, and found the stone in two fragments, as he now presented it. The patient had never had any instrument in his bladder until he introduced it, and he had never suffered any pain. He was satisfied that this was a case of spontaneous fracture.

DR. PREWITT, of St. Louis, asked Dr. Hutchison whether the calculus presented by him showed a distinct line of fracture, or if the edges were smooth and rounded off. The reply was that the line was distinct. He then said that he thought it possible for a very much contracted bladder to cause the fracture of a soft calculus, but that certainly such could not occur in a mulberry stone.

DR. POLLOCK, of Pennsylvania, reported that he had operated upon a patient seventy years of age, and had removed from his bladder sixty-six stones. They were of regular triangular, pyramidal form. He said that the idea of spontaneous fracture had not occurred to him until now.

DR. W. W. DAWSON, of Ohio, thought that the calculus exhibited by Dr. Gouley must have been broken, if broken at all, by his instrument. It is impossible for

the bladder to contract on a stone so as to fracture it. One point in the history of Dr. Hutchison's case struck him forcibly, and that was the absence of pain. He had found this usually the case where the rough surface of the calculus had become worn smooth. He had once removed a remarkably large mulberry calculus, fully as large as a hen's egg. That patient had for fifteen years suffered from irritability of the bladder, having to rise at night more frequently than he should, but further than that there was nothing at all to indicate the presence of a stone. He had no pain.

DR. GOULEY agreed with Dr. Dawson in regard to the impossibility of the bladder ever causing fracture of a stone contained in it. He said that a bladder so contracted and contractured had not strength enough in its walls to expel the urine, and of course it could not break a stone. But, besides that, it was unscientific, unpathological, and unsurgical to think of such an occurrence. He preferred the explanation he had given, comparing it to Prince Rupert's pearls.

DR. PREWITT asked how, if this comparison were correct, it happened that in Dr. Hutchison's stone there was but a single line of fracture, and not numerous, since the glass drops usually break into many pieces.

DR. GOULEY thought it a remarkable exception to the rule.

DR. C. A. WHEATON, of Minnesota, contributed a paper on

AMPUTATION AT THE HIP-JOINT, WITH A REVIEW OF THE VARIOUS METHODS OF CONTROLLING HEMORRHAGE.

He said that as he had made two amputations at the hip-joint during the past year, according to the recent method of Mr. Lloyd, of England, this led him to review the literature of the subject from its first employment, in 1848, to the present, with special reference to the methods of controlling hemorrhage.

The various methods were then narrated; pressure with the thumb or fingers, securing the vessels as they were divided in the flaps; pressure upon the common iliac, or on the aorta; tourniquets of various kinds, and preliminary ligation. The speaker then discussed the objections to these methods on the ground of their inefficiency, the delay or the dangers of trouble following their employment. There was danger to the sound side as well as to the diseased from the pressure of a tourniquet. Davie's lever, which has been most in favor, has always been considered safe, but a death occurred from it not long ago, due to peritonitis occasioned by its use. The hand has been introduced into the rectum to control the circulation, but this is not free from danger, and the arm of the assistant is frequently in the way of the operator. Reference was also made to a case reported by Dr. Varick, in the *American Journal of the Medical Sciences*, October, 1882, in which Trendelenburg's method was used; this consists in transfixing the leg with a small spear-pointed rod, running through close to the bone and making pressure by a figure-of-eight cord passed around the limb and over the ends of the rod, then amputating with the Lisfranc knife. He also described the method of Mr. Furneaux Jordan for articulating, and several other methods, including a detailed account of that by Mr. Lloyd.

DR. T. R. VARICK, of New Jersey, in moving the reference of the paper for publication, stated that he had recently made the Lloyd amputation. He also exhibited the spear used in the method by transfixion referred to in the paper, and stated that with it he had been able to make an almost bloodless operation.

DR. BYRD, of Illinois, remarked that he saw no need for an assistant to hold the rubber cord in place in the operation of Lloyd. He had modified it by passing the cord up over the anterior superior spinous process of the ileum, then down and around the limb, forming an eight; the ends were then tied, and no assistant was required.

DR. MURDOCK, of Pennsylvania, expressed distrust in the elastic compression where the limb is well developed and very muscular.

DR. DAWSON reported the case of a child upon whom he made this amputation about two years ago, using only the elastic tourniquet. He was surprised at the ease with which the hemorrhage was controlled, the operation being literally a bloodless one.

DR. MCGRAW stated that he had amputated three times at the hip-joint, with but one death, and that he controlled the hemorrhage with very little difficulty, and with no important loss of blood.

DR. MACLEAN favored the use of the abdominal tourniquet. He said it was very simple, easily applied, safe, and secure. He had never had any bad effects from it, except once where he applied it too long before it was required. He used the abdominal tourniquet in operations well down in the thigh.

The papers of Dr. Joseph Ransohoff, of Cincinnati, on *The Excision of Nasal and Naso-pharyngeal Polypi by a New and Easy Method;* of Mr. A. Pearce Gould, F.R.C.S., of London, on *Twelve Months' Experience at the London Temperance Hospital;* of Dr. Roswell Park, of New York, on *Tuberculosis of Bones and Joints, and Its Treatment by Ignipuncture;* and of Dr. C. B. Nancrede, of Philadelphia, entitled *Is Carcinoma Mammæ Curable by Operative Procedure,* were read by title.

DR. WILLIAM A. BYRD, of Ill., then read a paper on

A CALCAREOUS CALCULUS FOUND IN THE SUBSTANCE OF THE LIVER,

in which he reported a case that he considered unique. The patient had been suffering for four months with fever, rigors, and colliquative sweats, and had been treated by various physicians for malarial trouble. When he examined him, he found enlargement of the liver, and making an incision between the ninth and tenth ribs gave vent to a pint of pus. Probing the wound some days after, he discovered a hard body that he at first mistook for necrosed bone; being unable to remove it with the forceps between the ribs, he excised an inch and a half of the tenth rib, and removed it. During removal it broke, but the fragments aggregated a larger mass than the end of a man's thumb, and when dry weighed one hundred and fifteen grains. In appearance it was phosphate of lime. He considered it likely to have resulted from a thrombus of some branch of the hepatic artery cutting off nutrition from a portion of the liver which became the seat of the earthy deposit. The patient from whom it was taken recovered.

DR. N. SENN, of Milwaukee, then read a paper on

BRANCHIAL CYSTS OF THE NECK.

He referred first to the importance of all tumors of

the neck, because of their location. He then reviewed the numerous names applied by different authors to what he preferred to call branchial cysts. He choose this name because it expressed more correctly the nature of the affection. The anatomy of the structures involved was then closely studied, including the embryonal development. The location of these tumors was then found to correspond to that of the branchial clefts of the embryo. They are more likely to occur in the second and third clefts than in others, although they may occur in any part of the neck, the immediate cause being the folding in of a portion of the cleft so as to form a closed sac.

The literature of the disease was closely studied, and a large number of cases referred to as reported by Langenbeck, Billroth, Virchow, and others, with references to the opinions of the operators in regard to them. The histological structure of the cysts was next described, and the ciliated epithelium sometimes found in them traced to the origin of the tumor in the branchial cleft. The character of the contents of the cysts depends largely upon the amount of retrograde metamorphosis that had occurred in it. The varieties of branchial cysts were named mucous, atheromatous, serous, and hæmatoid. Unlike cutaneous cysts, these tumors never contain the products of the secretions of the skin, but only the products of a retrograde metamorphosis of the epithelial cells lining their interior. The different varieties were described, and a number of cases reported, including three which had occurred to the author.

In regard to the time of the development of these tumors, the essayist said that, although they owe their origin to an embryonal tissue, it is not essential that they should begin their growth at so early a period. It is only necessary that the tissue be there formed, and the abnormal growth will occur later in life. The most frequent time for this to occur is at puberty.

Although it is not essential to a proper treatment of the tumor that a positive differential diagnosis should be made between it and cutaneous growths or cysts of other kind, the use of exploratory punctures was advised. The various other methods of differential diagnosis were also carefully considered. The methods of treatment that have been tried are, incision, the actual cautery, seton, and puncture, with the subsequent injection of irritating fluids. The treatment must be thorough. Nothing short of complete extirpation is worthy of trial. Antiseptic measures should be in some cases, at least, added to the other treatment, and the general condition of the patient must be looked to.

Dr. W. A. Byrd called attention to the treatment by electrolysis, and expressed surprise that it had not been referred to by the author of the paper. He had tried it in several of these cysts, and found that it worked admirably. It is not painful, leaves no scar, and is perfect in its results. The great difficulty was that most persons do not use enough cells. He would not think of a less number than eighteen, and would not hesitate to use a stronger current.

Dr. Senn replied that he had used electrolysis, but that it had failed. He could not see how it would be possible for such a treatment to remove a cyst lined with a tissue so much like skin, and so ready to proliferate. He would gladly accept any treatment that would remove these tumors short of a complete extirpation; but he believed that the only treatment was to resort early to a radical operation. The tumors, if they have not been meddled with, can usually be easily enucleated.

The paper of Dr. P. S. Conner, of Cincinnati, on *Intestinal Paralysis Consequent upon Acute Pressure*, was read by title.

Thursday, May 8th—Third Day.

Dr. Chas. W. Dulles, of Pa., read a paper on

the treatment of hydrophobia, historically and practically considered,

in which he gave an extended review of the literature of the subject from the days of Aristotle to the present time.

Dr. H. O. Walker, of Detroit, moved that, as the paper of the Chairman, Dr. Parkes, had been referred to the Section, and an opportunity for hearing it had not been given in the general session, the author be requested to read his paper before the Section.

Dr. Chas. T. Parkes, of Chicago, then gave a brief abstract of his address on

gunshot wounds of the intestine, and their treatment.

[See The Medical News, May 17th, page 563.]

Dr. Quimby asked how near together the sutures should be placed in the intestine.

Dr. Tremaine, U. S. N., stated that he had made a number of experiments with a view of determining the very questions contained in Dr. Parkes's paper. He agreed with that gentleman in the belief that the abdominal cavity should be opened in cases of wound of the abdomen, in order to see what damage had been done. He thought it a disgrace for a surgeon to stand idly by and do nothing in such cases.

Dr. Dunlap, of Ohio, had not had any experience in gunshot wounds of the intestine, but reported a case in which a large portion of the stomach was torn away by a shaft in a machine-shop, and yet the wound healed. He objected to the statement in the paper that parts included in a ligature of the mesentery sloughed; basing his belief that it became vitalized on what he had seen take place in the stump of an ovarian tumor.

Dr. J. Ford Thompson, of Washington, had the opportunity within the last year or two, to witness a great deal of abdominal surgery in the clinic of Billroth and other German surgeons. He had there seen a modification of Lembert's stitch, which was devised by one of Billroth's assistants, and which he considered better than that of Dr. Parkes. It consisted in first stitching together the peritoneal surfaces of one-half the calibre of the wound, then the mucous membrane on that and on the other half, and finally the peritoneal surface of the latter side; in this way leaving two rows of sutures which effectually prevented the passage of fecal matter or even of gases through the wound. It also did away with the danger of strictures, which are so common after Lembert's suture has been used.

Dr. P. S. Conner remarked that certain points must be remembered in the consideration of this subject. These experiments on animals, to determine with what result a bullet passes through the abdomen, and to ascertain the best method of treating the injury in man,

were all very proper, but the conditions in the one case are often very different from those in the other. There is also a great difference between the treatment of such cases in civil and in military practice. In the latter, cases are received earlier and the surgeon is at liberty to use his judgment; but in civil practice the cases are frequently not seen until hours have elapsed, and even then the patient often refuses to have anything done. He stated that during the late unpleasantness at Cincinnati, he had received a case in which he desired to open the abdomen, but was not permitted to do so until the patient was moribund. He referred to the value of the temperature as an indicator whether or not the intestine had been injured, and was pleased to hear what had been said in regard to letting the wound alone, as a fresh incision was much safer, as well as more convenient.

DR. BYRD reported a case in which he removed successfully several inches of intestine in a case of strangulated hernia occurring in a very old patient, who was moribund at the time of operation. He further stated that he had operated nine times on the intestine; three times removing a portion of the entire calibre; three times removing a section; and three times making an incision. In removing a portion of the entire calibre, he had cut vertically, in order to prevent the formation of a circular cicatrix, which might lead to stricture.

DR. MURPHY said that in his experience with gunshot wounds of the intestine, the patients all died. He moved a vote of thanks to Dr. Parkes for his admirable paper.

DR. SAUNDERS, of Tennessee, in seconding the motion, remarked that heretofore our patients have died without aid, but that hereafter no military surgeon would be justified in allowing an individual with a wounded intestine to die without an operation.

DR. PARKES, in concluding the discussion, said that he had studied the double suture carefully, and that there were too many objections to it. The chief objection urged was that it required so much time for its introduction that the patient would be dead before it was accomplished. He believed, too, that the danger of rolling in of the mucous membrane was just as great with the double as with the single suture. Further, his suture was not Lembert's, but was an entirely different and a better one, for it took a much deeper hold in the tissues.

DR. T. F. PREWITT, of St. Louis, read the report of

A CASE OF CHRONIC SEROUS SYNOVITIS OF THE KNEE, WITH AN ENORMOUS COMMUNICATING POPLITEAL BURSA EXTENDING TO THE TENDO ACHILLIS.

. The case reported was that of a young man who was accustomed to sit constantly in a damp room, upon a revolving stool, where he frequently struck his knee against his desk. In November, 1882, he came to him with a swelling of the knee. He had no pain, and he could not fix the date when the enlargement began. It subsided somewhat under treatment, but he again came to him about a year ago. This time not only was the joint enlarged, but there was a large fluid tumor extending down from the joint to the ankle. He hesitated in forming his diagnosis, and for diagnostic purposes, as well as to prevent the rupture of the sac, he drew off four or five ounces of a thick, albuminous fluid. The question of amputation suggested itself, but he could not then recommend it. Three days later, he drew off more than half a gallon of the same fluid from the bursal cavity, and aspirated also the cavity of the joint. He then washed out the cavities, and in order to determine whether or not a communication existed between the two cavities he injected a weak solution of carmine into the upper opening, with the result that he found it in the lower sac a few minutes after. Two weeks later the knee refilled, but the sac did not. He then withdrew the fluid, washed out the cavity, and applied a plaster dressing, and the trouble did not recur for some time. After about six months, he returned for treatment, with the fluid again in the joint. In addition to this, there was an abnormal mobility of the joint, and the limb was smaller than the other, and after the fluid had been again removed there was some roughness of the joint. He believed the case one not simply of an enlargement and distention of the joint and bursa, but one in which there was a hernial protrusion of the bursa of the gastrocnemius muscle, The walls of the capsule had been softened and weakened by pressure until they yielded. Allusion was then made to the six bursæ found in relation with the knee-joint, and their positions described. Reference was made to the literature of the subject, and a short description given of several important cases. The difficulty of making a correct diagnosis was also referred to. As for treatment, aspiration, the tincture of iodine, the splint, and perfect rest of the joint, were all that could be used, except such measures as the general condition of the patient would require.

DR. BENJAMIN LEE, of Philadelphia, did not believe the mere finding of colored fluid in the lower sac after it had been injected into the upper, sufficient evidence of a communication between the two. It might have passed by osmosis.

DR. PREWITT replied that the colored fluid was found too quickly to admit of that explanation.

The papers of Dr. Edmund Andrews, of Illinois, on *[illegible] Slow, Imperceptible Motion;* of Dr. J. C. Hutchison, of Brooklyn, on *Transfusion;* of Dr. Schuppert, of Louisiana, *Urethrotomia Lithotriptica;* and of Dr. Quimby, of New Jersey, entitled, *Alcohol a Narcotic Irritant, and therefore not a True Stimulant*, were read by title, and referred.

DR. E. H. BRADFORD, of Massachusetts, presented

AN INSTRUMENT FOR THE TREATMENT OF OBSTINATE CASES OF CLUB-FOOT,

by which, after division of the tendon, and, in some cases, of the plantar fascia, the foot was brought straight and retained in that position. The instrument consisted of a flat plate on which the foot rested, and to which three or four braces were attached by binding-screws, supporting-rods, by turning which, pads were brought against different parts of the deformed foot, and with proper adjustment the deformity relieved. The inventor stated that the foot could be brought into proper position in a few minutes by gradual tightening of the screws, without inflicting much pain.

DR. PREWITT reported the cure of a case of club-foot in a young lady of twenty, by division of the tendo Achillis and plantar fascia, with subsequent manipulation. He said that on account of the unquestionable deformity of the bones which occurred in these cases, he

could not believe it possible to rectify a case of long standing at one sitting.

DR. BRADFORD replied that he had once performed a tarsotomy as recommended by German surgeons, and that he was then convinced that the deformity was not so much in the bones as in the ligaments and the fibrous tissue about the joints.

DR. QUIMBY did not agree with the last speaker, because he had *seen* the bones deformed.

DR. GILL believed the greater part of the deformity was not in the bones.

DR. B. LEE, of Philadelphia, believed that the lecturer had introduced the correct plan of treatment. He had used a method somewhat similar in effect to this one with good results. He believed the instrument a good one, but would be afraid of the inflammation that might result from too hasty restoration of the deformity.

DR. HENRY O. MARCY, of Boston, read a paper upon

THE RELATION OF BACTERIA TO SURGICAL LESIONS,

in which he gave a careful review of the evidences upon which the belief of the deleterious effects of germs upon wounds, and through them upon the general organism, was founded. The discussion of what constitutes a poison to wounds was entered upon, and the various exposures to which open wounds were liable.

The most important indication in wound treatment is to secure an aseptic condition, which may be defined as a wound surgically clean. Experimental proof is constantly accumulating to show that the inflammatory and other changes which ensue in wounds, are with few exceptions the result of the vital activity of new organisms. There is abundant evidence to show at least the extreme probability that septicæmia and pyæmia are one and the same disease, and that their sole and invariable cause is due to micrococcus poisoning.

DR. G. L. PORTER, of Connecticut, read a paper on

AN UNRECOGNIZED DANGER IN SURGICAL PRACTICE — ENTRANCE OF AIR AS A SECONDARY COMPLICATION.

The sad experience of surgeons, and the experiments of investigators, have made familiar the usual symptoms of the dangerous, and often fatal, accident of the introduction of atmospheric air into the venous circulation.

The report made by Beauchesne, in 1818, of the death, within a half hour, resulting from the entrance of air through the rupture of the internal jugular, was followed by many others, until they now number nearly a hundred. At first, the danger-zone was thought to be limited to the venous pulse in the regions of the neck, but the rapidly accumulating reports of deaths elsewhere from the entrance of air has extended the field of danger. The majority of modern instances are from the entrance of air into the uterine sinuses, either after local injections, deliveries, or attempted criminal abortions. A short time since, after sudden death in suspicious circumstances, I found a punctured wound of the internal os opening into the uterus, separation of four inches of the decidua vera and the uterine walls crepitant and distended with air. Death within ten minutes.

Hitherto this danger has been considered only as an immediate complication of a surgical operation. The following case illustrates the unclassified danger that may be developed many days after an injury in a vein of small size, and comparatively remote from the heart:

Above the right temple, one inch above eyebrow, one inch from median line, a contused wound nearly two inches long extending upwards and outwards, penetrated to the bone and denuded the periosteum. Considerable hemorrhage for two days, finally stopped by domestic applications. On the fifth day, first seen by the doctor, who found the patient in a squalid room, suffering from well-marked trismus, equally severe on both sides; wound unhealthy, inflamed, and gaping. Appropriate treatment relieved the symptoms, and reduced the local inflammation. Upon the ninth day, trismic spasms returned; at 3 o'clock A. M., tenth day, there was a severe clonic convulsion, and shortly afterwards she was found gasping for breath, and coughing up a thick tenacious mucus. Nitrite of amyl gave speedy relief. Three hours later, she had a second convulsion, in which she died. Examination twenty-six hours after death: Wound open, pus at bottom of external angle. No decomposition of body. Abdominal organs healthy and normal. While sawing calvaria, frothy blood bubbled through a small opening. Bubbles of air in small vessels of brain—a spumous fluid in sinuses. The right cavities of heart, and the descending and ascending cavæ filled with the same mixture of air and blood—a spumous fluid, the left side of heart containing fluid blood unmixed with bubbles of air. Congestion of posterior portion of lungs; anterior normal.

Death was caused by air in the venous circulation, entering through divided or injured branches of the frontal or temporal veins, stretched and held open by the trismus. The first convulsion occurred when the air—gradually entering through a small opening—had over-burdened the heart and lungs; the comparatively small amount of air had formed with a portion of the blood a spumous fluid, which had been churned back into the veins, allowing the rest of the blood remaining fluid to pass on into the general circulation, and sustain life, until the air, constantly increasing in amount, had vitiated so much blood as to cause the second convulsion, and destroy life.

The following objections were raised and answered. Death could not have resulted from air in the veins because: 1. Injury was outside of the danger-zone. 2. Long time after original injury. 3. Small size of vein. 4. Absence of noise of entering air. 5. Questionable liability of the spontaneous generation of air in the circulation. 6. The instance is without a reported counterpart. The knowledge of the possibility of such an entrance of air suggests to every surgeon the preventive means of carefully closing and protecting the wound, and the remedial measures to combat the danger should its characteristic symptoms occur.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Sixth Annual Congress, held in New York, May 12, 13, and 14, 1884.

[Specially reported for THE MEDICAL NEWS.

WEDNESDAY, MAY 14TH. FINAL SESSION.

BY a common agreement, the morning and afternoon sessions were joined into one.

A paper on *Herpes Laryngis*, by DR. S. H. CHAPMAN, of New Haven, was read by title.

Dr. T. A. DeBlois, of Boston, then reported some

CASES OF BUCCAL TUBERCULOSIS.

This affection, he said, was sufficiently rare to deserve mention whenever it was met with, either where the tubercular deposit first showed itself in the mouth or where, after manifesting its presence in other parts of the body, it finally extended itself into that region. He did not believe there was any good reason to doubt that tubercles always existed in the lungs before they appeared either in the pharynx or the larynx, and he was fully prepared to admit the same in regard to tuberculosis of the mouth. He had met with two cases of the latter affection, and both of them speedily proved fatal. Having related these cases in detail, with the results of the autopsies, he again called attention to the very bad prognosis, and then gave a *résumé* of the literature of the subject.

A paper on *Goitre*, by Dr. William Porter, of St. Louis, was read by title.

Dr. C. E. Sajous, of Philadelphia, then read a paper on

HAY FEVER AND ITS SUCCESSFUL TREATMENT.

His conclusions were as follows:

First. There is an idiosyncrasy existing in certain individuals to become influenced by certain emanations or irritating substances.

Second. The idiosyncrasy is accompanied by a chronic hyperæsthesia of that part of the nasal mucous membrane covering the inferior and middle turbinated bones, the middle meatus, the floor of the nose and that part of the septum between the limits of the olfactory membrane.

Third. Organic alteration of these parts annuls that hyperæsthesia; preventing at the same time what symptoms the patient may be liable to in case of an access.

Fourth. Any destructive agent will induce that organic alteration, but the galvano-cautery is by far the best; being painless, effective, and devoid of all danger when used in practised hands.

Fifth. In order to obtain a satisfactory result, a sufficient number of applications must be made, covering the entire extent of the hypersensitive surface; without which the result will be doubtful.

Until after he had completed this paper, Dr. Sajous said, he had been entirely unacquainted with the labors of Dr. Roe in the same direction, as set forth in the papers which he had read before the Medical Society of the State of New York in 1883 and 1884; in which he claimed that the essential subjective cause of hay fever was found in the nasal passages, having been induced by disease, either latent or active; that the objective cause of the irritation of this tissue was mainly pollen; that a cure could be effected by the destruction of the nerve-filaments and enlarged vessels of the part; and that the latter could most satisfactorily be accomplished by the galvano-cautery. If he could not be the first, therefore, Dr. Sajous continued, he was glad to be a good second in this matter, and he felt gratified that his conclusions had been confirmed by the more extensive experience of Dr. Roe, who had commenced his present plan of treatment as long ago as 1879, and therefore anticipated him by two years.

Dr. E. L. Shurley said that he had employed the galvano-cautery with success in one neuralgic case and in two cases of hay fever; but instead of singeing the whole surface, he had limited the applications to special points where nerve-filaments originated.

Dr. Bosworth said that he hoped that in the discussion the matter of permanent effect would be given consideration. He should like to know how long the results achieved had continued.

Dr. Shurley said that in the only case of his upon which any conclusions could be based the patient had remained entirely free from trouble for eighteen months.

Dr. J. O. Roe said that he was very glad, indeed, to have the results of his investigations so fully confirmed by the entirely independent ones of Dr. Sajous. As far as the permanency of the case was concerned, patients upon whom he had operated as long ago as 1879 had remained entirely free from all signs of hay fever up to the present time, and the only case among all that he had treated in which there had been any return at all of the trouble (and this was in a greatly modified form) was one in which he found that there was a small portion of hypersensitive tissue still remaining which he had inadvertently overlooked at the time that he made the galvano-cautery applications. This partial failure, therefore, was due not to any inadequacy of the method of treatment, but simply to his own want of care in practising it; and it only went to confirm his established conviction that the completeness and permanency of the cure depended on the thoroughness with which the treatment was carried out. In regard to the diagnosis, there was a simple procedure which he thought was of the greatest possible utility. This was touching the mucous membrane of the parts alluded to with the point of a probe, when an attack of asthma or other symptoms characteristic of an acute onset of the hay fever trouble would instantly be brought on. It was thus in the power of the operator to test whether his treatment had been thorough or not; for if, after he had applied the galvano-cautery to all the parts which seemed to be implicated, he touched the mucous membrane in different positions and found that no reflex irritation was set up, he could rest assured that the cure would be complete. On the other hand, if such irritation was set up, it would be necessary to apply the cautery to such portions of tissue as showed the presence of this hyperæsthesia. Some cases were undoubtedly due (though this was certainly not true of all, as claimed by Dr. Harrison Allen) to obstruction of the nose and hypertrophy. In these it was necessary to destroy the hypertrophied tissue, and to be particularly careful to remove any projecting spiculæ of bone (if such there were) which might prove a source of irritation. All the passages should be rendered entirely free, so that if a slight amount of swelling of the mucous membrane should occur, as from cold, it need give rise to no trouble. In many cases, however, in individuals who did not suffer from hay fever, there was found much more extensive obstruction and hypertrophy than in those who were the subjects of it. This went to show, therefore, as Dr. Sajous claimed, that there must be a certain idiosyncrasy in the individual before he would be liable to the affection.

Dr. J. N. Mackenzie, of Baltimore, remarked that what the essential anatomical condition in hay fever was he would not pretend to say, but he felt sure that there

was, at all events, an abnormal excitability of the reflex nerve-centres. In one case which he had seen, the most terrible paroxysms occurred in connection with the menstrual periods, which it was wholly impossible to prevent or modify, while paroxysms coming on at other times the patient was able to control by stopping up the nostrils. As to the excitation of the paroxysms by *ab extra* causes, he did not, for a moment, believe that pollen, for instance, was the essential cause of the trouble, as a rule, although in some instances it might perhaps be. Many patients suffered from attacks of hay fever at times of the year when they could not possibly have been excited by pollen. In order that this affection should occur, he believed that there must be, first, a predisposition, either inherited or acquired; and, second (for the production of the paroxysm), an engorgement of the nasal mucous membrane, particularly that covering the inferior turbinated bone and the septum. To the theory of nasal obstruction, advanced by Harrison Allen, he could not subscribe. As regards treatment, he coincided with Drs. Roe and Sajous, that the best plan was to destroy the membrane of the area mentioned, no matter what the nerve-centres concerned in the trouble might be. By this means a part of the mechanism by which the disease was produced was abolished, and this was all that was necessary to put a stop to it. In concluding, he said that he would like again to lay special stress on the importance of the excitability of the nervous centres as a factor in the causation of hay fever.

Dr. Beverly Robinson, of New York, said that he had applied pure carbolic acid to the parts of the nasal mucous membrane referred to, with a very considerable degree of success. To the adoption of this method he had been led almost by accident, as on one occasion a lady suffering from a violent attack of hay asthma, to which she had been subject for many years, had suddenly applied to him in the emergency, and, happening to have the carbolic acid at hand at the moment, it occurred to him that it might perhaps be of service to try its effect. The result in this case had been so successful that he had been induced to treat others in the same way, and it had seemed to answer quite well.

Dr. Roe said that he could not agree with Dr. Mackenzie in regard to the part played by pollen in the causation of hay fever, as he thought it was a most important one. If the affection were not in some measure due to pollen, we should have it occurring at any time, while in fact the recurrences of the trouble were as regular as clockwork, and many patients could predict the precise day on which the attack would commence. This, he had not the slightest doubt, was because the ripening of plants occurred with such regularity every year, the paroxysms of hay fever being always coincident. The pollen theory seemed, therefore, to be a well-established one.

Dr. Mackenzie said that he thought, on the other hand, the attacks were just as bad in winter as at other times of the year, and hence could not be attributed to the irritation of pollen. They seemed to him to be associated to a great extent with meteorological conditions; and there were many sources of irritation besides pollen that would give rise to an attack, such as dust and exposure to cold in various ways. In regard to recurrence of the affection at a given day and hour each year, he believed that it was due in many instances purely to the imagination.

Dr. Roe said, in reply to Dr. Mackenzie, that it was a mistake to suppose that patients were not liable to the irritable effect of pollen in winter, as the latter might be in the air in some places at any period of the year, thus, he had known persons to be attacked with hay fever in the middle of winter after going into barns where hay was stored.

Dr. S. Johnston, of Baltimore, said that he himself was a subject of this affection, and that in his case the attacks always came on regularly on the 28th of August. By remaining in town and avoiding dust, however, he could get along comparatively comfortable while they lasted. He always suffered intensely, however, from railroad travel during the attack. Last summer he went away in the midst of it, feeling in pretty good condition when he left home; but when he reached Washington he suffered from a terrific paroxysm. From there he went up into the Alleghany Mountains, and as soon as he reached them all trouble instantly vanished. As long as he remained there he was perfectly free from it; but as soon as he got back to Washington he was again attacked. In his own case he had derived most relief from chloroform, eucalyptol, and the insufflation of one-sixth of a grain of morphia in solution. He thought the affection was undoubtedly due to an exciting element, combined with some neurosis.

The President expressed the opinion that in every case of hay fever there were three essential elements, viz.: (1) A neurotic. (2) A structural (in the nasal cavities). (3) A sensitive (sensitiveness to pollen, dust, or other source of irritation). If any one of these factors were removed, the case would be cured; and it was perfectly immaterial which element was eliminated. Thus, he knew of one case which was completely cured by the patient's overcoming an inherited neurotic tendency by means of a systematic course of hygienic measures undertaken for this special purpose. The combination of all the three elements was essential for the existence of the affection.

Dr. Sajous closed the discussion. He said that in advocating the theory of special idiosyncrasy he did not wish, by any means, to ignore that of reflex centres. Practically they were one and the same thing. The exposed surface in every case was the nasal mucous membrane, but if there were no hyperæsthesia here, there might be in other parts of the body, as the vagina, for instance. The hyperæsthetic condition of the nose was particularly sensitive to pollen, and, therefore, the latter was one of the most common exciting causes, and dust was very apt to act in the same way in the case of those who were not affected by pollen. The point made by Dr. Roe in regard to diagnosis and the assurance of a cure by the probe-test, he thought a very admirable one, and he would certainly always avail himself of its advantages in the future.

Dr. E. L. Shurley, of Detroit, read a paper on

THE COMPARATIVE VALUE OF THE GALVANO-CAUTERY IN DISEASES OF THE NASAL AND PHARYNGEAL CAVITIES,

the aim of which, he said, was to consider (1) the conditions necessitating the use of this or some other similar agent; (2) the comparative value of this and others; (3) the intelligent application of the galvano-cautery.

Having referred to the physiological functions of the nasal passages as the vestibule of the respiratory apparatus, he said that he found that the importance of these was too often lost sight of. In cold climates, it was especially necessary that the nasal mucous membrane should be filled with blood, in order to warm sufficiently the air as it passed over it. In any case in which nasal hypertrophy existed, the first thing to find out was whether this condition was permanent or only temporary; and, if it was permanent, whether the hypertrophy was sufficient to give rise to local and general disturbances. If this was found to be the case, it was necessary to destroy a portion of the hypertrophied tissue; but he strongly advised that as little as possible should be destroyed, as he thought the tendency of the present day was to destroy too much. Cicatricial tissue was always a disadvantage, and if there were too much of it, progressive chronic pharyngo-laryngitis would eventuate.

In speaking of destructive agents, he mentioned, first, mechanical instruments, such as the knife, scissors, and forceps. The forceps, he thought, tore and destroyed an unnecessarily large amount of tissue, and was also very painful. In tumors, the use of the wire snare was much preferable; but in dealing with exuberant mucous membrane, it had not proved efficient in his hands. In regard to chemical agents, he said that when used in a cautious manner, they did not destroy a sufficient quantity of tissue, and, if they were used more freely, they were apt to set up too much irritation.

He preferred to use the galvano-cautery in the conditions under consideration. It possessed the merit of precision, thus enabling the operator to touch with facility the exact spot that he wished, and avoid doing injury to the surrounding parts. The reaction in the adjacent tissues resembled normal vitality more closely than that secured by any other agent. Another great advantage was its painlessness, which allowed plenty of time for operating with deliberation. He had formerly employed Byrne's battery, which served the purpose required quite well, but of late had confined himself to the use of an ordinary thermo-electric pile of zinc and carbon—such as he now exhibited to the Association—which was cheap and always ready, while it furnished all the electric force necessary. In operations with the galvano-cautery about the pharynx, he advised that the soft palate should always be held forward. In conclusion, he urged two points: (1) to injure or destroy as little tissue as possible; and (2) to cut through the neoplasm as narrow a tract as will suffice.

Dr. W. C. Jarvis, of New York, said that he did not believe any means were so precise as the use of the wire and needle, which he had recommended, and which, he regretted to say, were not employed to as great an extent as he had anticipated. No other method, he thought, was so efficient. Pharyngitis sicca had been referred to in the paper as likely to result from the presence of cicatricial tissue; but in all the cases in which he had used the needle, he had yet to see the first one in which this condition had resulted. At the same time, he agreed with Dr. Shurley that too much tissue was often removed. This point seemed to him an additional recommendation for the use of the needle, after which such a result was scarcely likely to follow.

Dr. Seguin said that he had used the snare a great deal, and had never known the dry condition to occur after it. A much better result could be obtained with the needle in the anterior turbinated tissue than by any other means. He was constantly in the practice of using the galvano-cautery also, and in many conditions it constituted the best method of treatment.

Dr. Roe thought that the galvano-cautery was very useful, but also contended that it should be employed with great caution. In cases in which it was applicable, nothing else was so efficient—as, for instance, in hay fever, in which no other agent would answer the same purpose. Different operators, however, were liable to go to extremes in the advocacy and employment of special methods which they had found to be of service.

Dr. Bosworth said that American laryngologists had long labored under a load of precedent which had been brought from the other side, but they were beginning to be more independent of this, and were now in reality doing better work in various departments of laryngology than was being done in Europe.

Dr. Mackenzie said that there was no warmer advocate of the use of the snare than himself, but, at the same time, in many cases he thought it was inappropriate. In posterior hypertrophy it was often impossible to operate successfully with the snare, and here the galvano-cautery could be used with good effect, while for complete destruction of erectile tissue there was nothing so efficient as this. In anterior hypertrophy of the turbinated bone, in which there was an anginose condition, it was also of the greatest possible service, and in granular pharyngitis he agreed with Dr. Shurley that it was the treatment of all others.

Dr. Shurley, in closing the discussion, said that he was free to confess that his failures with the snare and needle were probably due not to the instrument, but to his own lack of skill in using it. Some men got into the way of using special agents with peculiar skill and effect, and this Dr. Jarvis had undoubtedly done in the case of his own instruments; but he thought that others who had not attained this special skill might do much harm with them. In his own earlier practice he was convinced that he had been in the habit of destroying too much tissue with the galvano-cautery, as well as the snare; but this was an error which his later experience had taught him to avoid. In conclusion, he said that when a highly vascular condition was to be treated, there was no method with which he was acquainted by which the amount of tissue to be destroyed could be so nicely regulated as that by the galvano-cautery.

Dr. Beverly Robinson, of New York, then read

A CONTRIBUTION TO THE STUDY OF ADENOID VEGETATIONS AT THE VAULT OF THE PHARYNX.

He said that he did not propose to go into a consideration of the whole subject of adenoid vegetations, but merely to relate some of the results of his own experience in regard to it, and especially in the matter of treatment, which differed from that of Meyer and some other European observers, and of Drs. Bosworth and Swinburne in this country. In the large throat clinics with which he was connected, as well as in private practice, he had met this condition less frequently than the authors referred to; so that, judging from his experience, he could say that it was rare in New York.

After giving a number of statistics in reference to the subject, he related a case which had been under his care at St. Luke's Hospital. The patient was a young, single woman, twenty-four years of age, who, one year before admission, began to be troubled with naso-pharyngeal catarrh. On examination, it was seen that there was a polypus in the right nasal fossa, and in the larynx; the left arytenoid cartilage was found to be congested, while there was an adenoid growth at the vault of the pharynx. This was about the size and shape of an ordinary chestnut, and was removed by Bosworth's modification of Jarvis's snare. There were still some adenoid vegetations left, however, and these were scraped away by means of a Thomas uterine curette. He had yet to meet a case in which the pressure of adenoid growths over the pharyngeal orifice of the Eustachian tube caused deafness, as was so often claimed by other observers. In a case of his own, in which there was considerable deafness, with deviated septum, nasal obstruction, and adenoid growth of the pharynx, the deafness was entirely confined to the ear on the opposite side from that on which the lesions were located. That in twenty-seven out of forty-two cases of adenoid vegetations which Swinburne had reported, there was one affected; and in fourteen of these, perforation of one or both *membranæ tympani* occurred. This frequency certainly did not agree with his experience, and he thought it must be that Dr. Swinburne and he did not agree as to the exact condition to which the name of adenoid vegetations was applied. Voss and other authors had also written of the frequency of the complication of aural complications. He took exception to the considering of follicular pharyngitis as of an adenoid character, although it was true that this condition often existed in connection with adenoid growths. He had not found that the latter were as prone to bleed on being touched as some had represented. In regard to the question of heredity, he agreed with Meyer, that there was this tendency about such vegetations.

In his treatment he had employed Meyer's method with some success, but in sessile growths he had never effected a permanent cure, although he had removed as much tissue as he deemed justifiable. Other cutting operations had never impressed him with much confidence in their efficiency. When cutting instruments were used, however, he thought they should always be guided by the finger, or else with the aid of the rhinoscopic mirror. When this could not be employed, Thomas's blunt wire uterine curette was probably the best instrument to use, as no injury could be inflicted by it on the surrounding parts. A few days afterward it was advisable to make an application of nitrate of silver, or the galvano-cautery. In general, in cases in which Meyer's method could not be used, the galvano-cautery constituted the best means of treatment. It was particularly adapted to sessile growths; while Jarvis's plan was the best for pedunculated growths. In operating for this condition he had not found it necessary to give ether to adults or adolescents. Except in very rare instances, he would employ the galvano-cautery in the case of children, preferring the use of the snare or knife. Having specified some of the details which were of advantage in operating with the galvano-cautery, he remarked that he had yet to see a single case in which inflammation of the middle ear followed its use.

DEAFNESS DEPENDING ON DISEASE OF THE MIDDLE EAR.

DR. S. W. LANGMAID, of Boston, related a case of deafness, believed to be due to non-suppurating disease of the middle ear, and to be permanent, which was completely cured by the removal of an adenoid growth extending from the orifice of one Eustachian tube to that of the other.

DR. MACKENZIE said that he knew of no class of cases in which more brilliant results could be obtained by operative procedures than where deafness depending on disease of the middle ear, which was due to the presence of adenoid growths of the pharynx, was cured by the removal of the latter. These cases, he had found, are exceedingly common among children. The growths were papillomatous, as a rule, and could be snipped off with the forceps. It was his practice to fix one blade of the forceps and use the other as a curette, when, if any of the adenoid tissue remained, he applied strong alcohol to it. It had been debated by some whether such growths should be removed in children or not; but there was no question in his mind as to the desirability of this. If the child were permitted to grow up with them, irremediable changes were liable to occur which would result in permanent deafness. The neglect to interfere in such cases was, therefore, a positive cruelty to the child. He laid special stress on this point, because he believed the condition under consideration to be a frequent cause of deafness in children. As to the etiology of the affection, in the vast majority of instances in his experience it had been due to some local trouble in the vault of the pharynx, usually resulting from one of the febrile diseases of childhood, and the most common of all was diphtheria. The ready bleeding of these growths he considered diagnostic, and hence when a child was presented to him suffering from deafness, and he found that bleeding resulted from the introduction of the finger into the pharynx, he had not the slightest hesitation in pronouncing the case to be one of adenoid vegetations. He consequently differed from Dr. Robinson in his opinion on this point, as well as in regard to the frequency of the affection.

DR. ROE said that he agreed with Dr. Mackenzie that bleeding from touching the pharynx was diagnostic of these growths. He was in the habit of removing them with the forceps.

DR. ASCH coincided with Dr. Robinson as regards the comparative infrequency of the condition, In two large throat-clinics with which he had long been connected, it was surprising how few cases of it were met with. The fact was, however, that patients with adenoid vegetations of the pharynx, as a rule, suffered from very little difficulty. There was some alteration of the voice, perhaps, but it was not of the marked character described by Meyer, of Copenhagen. He had not found it necessary to use the galvano-cautery in this condition.

DR. JARVIS remarked that he had always felt a prejudice against the use of the forceps. The principle of the instrument was a vicious one, and it seemed to him a savage kind of treatment to grasp and tear the tissues in the dark. About three weeks before, there had come to him a patient suffering from carcinoma who had been under the care of another physician, who had removed a portion of the growth with the snare and then used the forceps to remove more of it. Although

he was a skilful operator, the patient had suffered the most excruciating agony during the operation, and the parts had been much mutilated; a long strip of mucous membrane still hanging down into the pharynx when Dr. Jarvis saw him. Dr. Jarvis used a snare with the curette suggested Dr. Bosworth, and removed all the remaining portion of the growth without occasioning the patient any pain. He said that in operating in many cases it was desirable that the soft palate should be held up out of the way by means of a rubber loop.

DR. ROBINSON, in closing the discussion, said that the more he examined throats the less disposed he was to interfere (except in perhaps a very mild way), unless there was no doubt of there being trouble specially due to local conditions present. In half the number of cases operated on, he believed that no good was accomplished and positive harm was often done; and the point which he wished to emphasize particularly in his paper was, that the galvano-cautery, snare, and other violent measures in fifty cases out of a hundred were really of no use.

DR. LOUIS ELSBERG read a paper on

SPASM OF THE GLOTTIS.

This, he said, had been prepared at the special request of the President. Our knowledge of the subject was comparatively recent. The affection in the child had only been recognized within the last two hundred years, and in the adult it was still involved in much confusion, as was indicated by such terms as laryngeal chorea, laryngeal epilepsy, etc., which he trusted would soon be dropped forever from medical literature. The definition was, the spasmodic contraction of one or more of the laryngeal muscles. It might be unilateral (though he had never seen an instance of this), or bilateral, and it might be simple or complicated (with the spasm of other muscles). Again, it might occur in the domain of the superior or inferior laryngeal nerve. There were three varieties, (1) expiratory (including phonatory), (2) inspiratory, and (3) deglutitory. Having given a list of the various synonyms of spasm of the glottis, he passed on to the etiology, and spoke first of the predisposing causes. The most important of these was morbidly increased irritability of the nervous system, and it was on this account that age had so much to do with its causation. The affection was most frequently seen between the fourth and twenty-fourth months of life; but it was a mistake to regard it exclusively as a disease of childhood. In the matter of sex, boys were more subject to it than girls, but in adult life women suffered from it more frequently than men. Heredity had some influence in the etiology, and the general condition played a most important part in this regard. Thus it was most frequently met with in children badly nourished and living in unwholesome and badly ventilated rooms, while among the well-to-do classes it occurred oftener in hand-fed than in nursing infants. It not infrequently came on at the time of weaning, and rachitic children were particularly subject to it. Hydrocephalus and microcephalus also predisposed to it. Enlargement of the thyroid body had been formerly supposed to be the only cause of it, but it had now been shown that it was not a cause at all, although it was quite frequently present in cases in which it occurred. Among the other causes mentioned were hysteria, injuries (especially from food or drink getting into the larynx), catarrhal inflammation of the respiratory mucous membrane, gastric irritation, and emotions, such as anger or fright. In one of his adult patients the trouble was brought on by going up in a high swing, and in a young girl, who suffered from expiratory adductor spasm, it was due to enlarged tonsils.

Then taking up the diagnosis and symptoms, he said that the latter differed according to the set of muscles affected. In abductor spasm there was insufficient closure of the rima glottidis. Dr. J. Solis Cohen had related a case at the present meeting. Adductor spasm was of several varieties: 1. The deglutitory. After swallowing, there was more or less suffocative narrowing of the rima glottidis. The attack lasted less than a minute, and, until the next one came on, the patient could swallow with impunity. Dr. Elsberg had seen one very marked case, however, in which complete spasm of all the abductor laryngeal muscles continued for a week, and the patient was threatened with starvation.

2. Inspiratory. There was closure of the *rima glottidis*, and the trouble might be mistaken for paralysis, which, however, might coexist.

3. In the simple phonatory form there were no symptoms unless the patient attempted to use the voice, when it would be found that the voice had a choked sound; but if phonatory efforts were persisted in, dyspnœa would result.

4. In the simple expiratory form, the attack came on if the patient attempted to whisper, as well as to speak or sing. Nothnagel reported a case in which the spasm was excited by the attempt to blow out a candle; while others had been noted in which the attack was brought on by coughing, and in others, again, by laughing.

5. The complicated expiratory form, or "curious cough." There are two subdivisions of this:

a. As to the mode. The spasm was paroxysmal or continuing. The hacks were not so severe as the cough in the continued form, while they observed a certain rhythm. Both were usually absent during sleep. Chorea was sometimes observed in connection with the trouble, and it was this variety which had afforded the pretext for the characterization of the spasm as "laryngeal chorea," which was, however, a term that could not be too strongly condemned.

b. As to the acoustic quality. This was often very peculiar; the sound might be of a barking, quacking, crowing, or lowing kind; was apt to be very loud and discordant.

6. The complicated inspiratory form. This was the most common and dangerous, and was that ordinarily known as laryngismus stridulus. For a correct and graphic description of this, Dr. Elsberg referred his hearers to the work of Morell Mackenzie, which he said he regretted that he had not the time to quote.

In regard to the prognosis, Dr. Elsberg quoted from the statements which he made last year, and also from Mackenzie, who said that the longer the period of intermission between the attacks, the greater the chance of recovery. The treatment required great promptitude, sometimes operative skill, and always good judgment. In some of the forms of adductor spasm the finger should always be thrust into the throat, to see whether or not the epiglottis was impacted. Catheterization of the trachea was preferable to the performance of tracheotomy as a rule. Time would not permit him to dwell

further upon the treatment; but the ordinary means for relaxing spasm would occur to all.

Dr. E. Fletcher Ingals inquired what sized catheter Dr. Elsberg would use.

Dr. Jarvis spoke in reference to laryngeal growths as being a cause of spasm, and said that he had sometimes observed the tendency to spasm remaining after such growths had been removed.

Dr. J. O. Roe had seen quite a number of cases, which never failed to yield to the inhalation of chloroform. One quite remarkable case had been under his care in which the spasm was due to congestion of the arytenoid cartilage. The patient was not able to swallow solids at all, and only at certain times could swallow liquids. By treating the local condition the tendency to spasm was gradually overcome; but it was a long time before the patient acquired sufficient confidence in his ability to swallow solids to attempt it.

Dr. Elsberg said that on account of the pressure for time his reference to the treatment had been very meagre. In regard to the point of Dr. Jarvis, the latter had not seemed to notice that he spoke of hyperæsthesia of the larynx as liable to induce spasm. The case which Dr. Roe had related answered typically and perfectly to one of deglutitory adductor spasm which he had himself met with. Chloroform he thought was excellent as a rule, except in the case of children, in whom he regarded it as particularly dangerous. In regard to the size of the catheter to be used in the trachea, this would depend altogether on age and size of the patient. The catheters which he employed were the hard rubber ones of Shroetter; and, like the tracheotomy tubes that he used, were of six different sizes. The outside diameter of No. 1, was one-sixth of an inch; of No. 2, one-fifth of an inch; of No. 3, one-fourth of an inch; of No. 4, one-third of an inch; of No. 5, between one-third and one-half of an inch; and of No. 6 (the largest he ever used), half an inch. From birth to the age of one year he used No. 1; when the patient was from 1 to 3 years, No. 2; from 3 to 7 years, No. 3; from 7 to 15 years, No. 4; in women and small men, No. 5; and in large-sized men, No. 6.

The officers were then elected for the ensuing year, as previously reported, and the new President, Dr. Shurley, made a few suitable remarks on taking the Chair. The selection of the time and place of the next annual meeting was left to the Council.

The Association then adjourned.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Thirty-fifth Annual Session, held at Philadelphia, May 14, 15, and 16, 1884.

(Specially reported for The Medical News.)

Thursday, May 15th—Second Day.

Morning Session.

THE TREASURER'S REPORT

was presented and showed a balance of $2451.65.

THE ADDRESS IN MEDICINE

was then delivered by Dr. W. H. Daly, of Alleghany County. The researches of Koch and Pasteur were reviewed somewhat cynically. The practical results, he thought, had been *nil*, so far as the saving of life was concerned. The recent good results in surgery, he thought, were due rather to cleanliness than to antisepsis. He recommended clinical observations in preference to theoretical researches, and cited the discovery of vaccination as one of the triumphs of clinical study.

Dr. E. A. Wood, of Alleghany, thought that the results of the investigations of Koch and Pasteur should not be disparaged. He thought that Jenner's discovery was rather accidental, while those of Pasteur were scientific deductions, and that true scientific education should always be encouraged.

Dr. C. W. Dulles, of Philadelphia, read a paper on

DISORDERS MISTAKEN FOR HYDROPHOBIA.

After calling attention to a previous paper, in which he had suggested the need for an attitude of more careful criticism, and for a fuller acquaintance with the methods by which the true nature of cases of supposed hydrophobia should be tested, the author took up this matter more in detail. He deprecated the common habit of diagnosticating hydrophobia from the symptom of an aversion to drinking. This, he said, is not a characteristic symptom, for it is by no means always present in hydrophobia, and it is often present in other disorders. Yet, unfortunately, it is such a striking phenomenon that it leads observers to overlook other indications which, if properly estimated, would lead to the discovery of the real cause of the trouble. Admitting that all physicians are aware, in a general way, that there is a simulated hydrophobia, they do not know this with precision enough. The cases of this kind are called lyssaphobia, or spurious hydrophobia, but they are not assigned to their several classes as they should be. Even treatises on hydrophobia do not give any adequate idea of the great number of diseases in which hydrophobia may arise as a symptom. To meet this want the present paper has been undertaken.

Dr. Dulles divided the disorders which may simulate hydrophobia into: 1. Disorders of the alimentary canal. 2. Disorders of the respiratory apparatus. 3. Disorders of the circulatory apparatus. 4. Systemic disorders. 5. Disorders of the nervous system.

In inflammations of the fauces, which have been somewhat vaguely classed as angina and cynanche, the difficulty of swallowing has frequently led to symptoms usually considered peculiar to hydrophobia. In such cases, especially when the sufferer is a child or a nervous person, the very importance attached to the act of drinking heightens the disorder, and tends to make it present more and more the picture of hydrophobia.

He next took up the difficulty of swallowing which accompanies inflammations of the œsophagus. After this he referred to that which may arise in inflammations and irritations of the stomach and intestines. The disorders of the respiratory apparatus discussed were the cynanches or anginas before alluded to, then inflammations of the larynx and trachea. Functional and organic diseases of the heart next came under review. Of the systemic diseases in which hydrophobia may be simulated the first considered was rheumatic fever. Uræmia was next spoken of and attention was called to the significance of the assertion that the presence of albumen in the urine is a symptom of hydrophobia. A case was given in which a child twelve and a half years

old, treated for hydrophobia with doses of one-tenth grain of atropia, had "one-third albumen" in the urine. It was also stated that one of the cases from which Dr. Gowers obtained the specimens for his well-known description of the microscopical lesions of the brain and spinal cord in hydrophobia, was probably a case of nephritis. Other less easily classified systemic disorders, which may have symptoms like those of hydrophobia, were then taken up. Of these were various fevers, Dr. Rush being cited as classing hydrophobia as a malignant fever. Several cases in which hydrophobia was intermittent were mentioned, and an article by Dr. Dumas, in which an intermittent fever simulated hydrophobia. The effect of mercurialization as a cause of the symptoms of hydrophobia was then spoken of, and the claim made that some of the older notions as to the nature and course of this disorder may have come from confounding its phenomena with those of mercurial poisoning. In concluding this division of the subject, the occurrence of hydrophobia in pregnancy was alluded to.

Of the disorders of the nervous system, meningitis was first taken up, and dismissed briefly, as being too well understood to need argument. Next it was stated that apoplexy might, in certain of its forms, present symptoms seen in hydrophobia. The same was said to be true of hydrocephalus, and tumors of the brain. Turning to diseases of the brain, which have a more obscure pathology, the author dwelt at some length on the similarity between the symptoms of hydrophobia and those of acute mania. Tetanus was then considered. In this connection the author indulged in a slight digression to deny that the hydrophobia could be attributed to anything "specific" in the saliva of a mad dog, since it was proved that the same effects were produced by the bites of dogs not rabid, and of men, and by a variety of traumatisms.

The simulation of hydrophobia by epilepsy was then discussed, and illustrated. Afterwards hysteria and various psychical states were compared with hydrophobia. This part of the discussion was illustrated with a number of interesting cases. Last of all, the writer spoke of the production of the symptoms of hydrophobia by a variety of narcotic poisons, all of which have been frequently used in the treatment of this disorder. He also intimated that sometimes patients were hastened to their death by the unwise solicitude and management of their physician.

It is the opinion of Dr. Dulles, that the true nature of hydrophobia will never be understood until, as a first step, physicians learn the importance, when called to what seems to be a case of this kind, of rigidly excluding the possibility of the phenomena being due to some other and better understood disorder. To this end he deems it necessary that it should be much better known and remembered what a variety of other disorders may simulate hydrophobia. He does not claim for the present study completeness in its own field, but hopes that it may suggest a line of investigation which, if generally and carefully followed up, will lead to something more creditable to our age than the present ignorance in regard to both the nature and treatment of what is called hydrophobia.

Dr. Traill Green, of Easton, thought there was a great deal of error on the subject. He had seen but one rabid dog, and had never seen a case of rabies humana.

Dr. Arthur van Harlingen, of Philadelphia, then read a paper entitled

THE PRINCIPLES OF EXTERNAL TREATMENT IN DISEASES OF THE SKIN.

The employment of outward applications in the treatment of diseases of the skin has always been largely empirical; a remedy having been chosen in a given case, not with the object of producing a certain desired effect in a known condition of the skin, but because it had been said to be useful in the disease supposed to be present. This "doctrine of specifics" was so prevalent some years ago that but four remedies were commonly employed in skin diseases, namely, mercury, arsenic, sulphur, and oxide of zinc. A disease was either eczema, when arsenic and oxide of zinc ointment was the specific; or it was the itch, when sulphur was to be made use of; or it was syphilis, when mercury was to be employed.

It had occurred to the author that if the more commonly used external remedies could be classified according to their effects upon the diseased integument, certain principles of treatment might be arrived at, which would enable the physician to treat most forms of skin disease according to the appearances presented, without this necessarily involving a knowledge of the nomenclature and classification of dermatology.

He then went on to sketch out a scheme by which the various outward applications commonly employed were arranged according to their effect, as protectives, sedatives, astringents, anæsthetics, stimulants, caustics, and mechanical means of treatment, giving under each head the effects of each class of applications, together with a list of individual medicaments belonging to the class.

The paper was put forth with the hope of suggesting lines of treatment which might aid the general practitioner in the management of the skin diseases encountered in every-day experience.

Dr. J. H. Musser, of Philadelphia, presented a *Modification of the Sphygmograph; being a change in the Base of the Instrument of Pond.*

Dr. J. V. Shoemaker then made some remarks on *Jequirity; its Use in Diseases of the Skin.*

Dr. J. B. Potsdamer, of Philadelphia, then read a paper on

BRONCHITIS AND PNEUMONIA OF RHEUMATIC ORIGIN.

The anatomical seat of this disease, he said, is in the white fibrous tissue of the bronchi, which is inflamed. It does not affect the mucous membrane primarily. Pneumomia is always secondary to rheumatic bronchitis, and may occur in the same lung. Proper rheumatic treatment will often save the patient. Further, it bears a direct relation to rheumatism and rheumatic endocarditis. The prognosis is favorable, provided the disease is recognized early, otherwise the pneumonic process may go on and the patient succumb or the lung may break down and the patient eventually dies of consumption.

The treatment is the same as is indicated in rheumatic affections elsewhere. Salicylic acid and its salts, or phosphate of ammonia, being given when uric acid and urates are found in the urine, and lemon juice when phosphates are present.

Dr. Traill Green, of Easton, followed with a *Plea*

for Chemistry, which he was led to make by seeing some dangerous prescriptions in medical journals.

Afternoon Session.

Dr. Jacob Price, of West Chester, delivered the

address in obstetrics.

He recognized two forms of vomiting of pregnancy. One the slight form, the other "pernicious vomiting." The latter was dangerous in proportion to the time elapsing between impregnation and vomiting. The shorter the time the greater the danger. Pernicious vomiting was always connected with inflammation, congestion, or ulceration of the cervix uteri, or a combination of these. The treatment is by rest and local application of iodine, carbolic acid, and tannin.

The removal of the secundines in early abortion, by instruments, was decried. A tampon would serve as a plug to stop bleeding, when the placenta would be cast off. Forcible dilatation of the cervix was condemned. The danger of post-partum hemorrhage was to be avoided by administering ergot immediately after delivery, and maintaining ergotism for at least twelve hours. Venesection was the best remedy in puerperal convulsions, and thorough antiseptic treatment, including vaginal injections, was advised in puerperal fever.

Dr. J. A. McFerran, of Phila., then read a paper on

obstetrical forceps jointed at the junction of the blades and shanks.

If the forceps hold the head in an unfavorable position, it must continue as it is held if the chin has departed from the chest, thereby lengthening the diameter; there is no possibility of producing flexion to shorten it; if traction be made, there must be unnecessary resistance, and consequent injury. With the forceps fixed to the head, the centre of motion is at the junction of the head and neck, and any flexion possible with the forceps amounts to but little, on account of the short distance between the arch of the pubes and the perineum, and the head swinging in a smaller arc than the handles. The head being fixed, the line of traction must be direct from the point where the force is applied to the point of resistance. No curves in the forceps can avoid this. This direct line is in an oblique direction, approaching more or less the planes of the pelvis, consequently the head is pulled hard against the pubic side, thereby necessitating greater force, the excess being spent upon the tissues of the mother and corresponding parts of the child. Dr. A. H. Smith being fully aware of this difficulty, and the dangerous pressure it subjects the parts to, professes to avoid it by making a lever of the forceps, using one hand close to the vulva as a fulcrum, and making traction at the same time. Dr. McFerran believed his mode of traction to be the best that can be used with the ordinary forceps; still he is fully convinced that it falls far short of producing the desired result. The head is not free, and the force backwards is spent upon the junction of the head and neck, which, if effective at all, would cause extension of the head and would bring trouble in one direction in attempting to avoid it in another. If the perineum and os coccygeus were out of the way, by holding the head back it might be swept out of the pelvis in the manner proposed; still, the other inconveniences would remain.

Traction must be made in an oblique direction, be the shape of the instrument what it may. Admitting that it is evident that the desire to avoid the perineum will cause us to elevate the hands more or less, we thereby depart from the axis of the pelvis, sometimes so far as to lock the head between opposing points; and even when this does not happen, there is a demand for greater traction which involves consequent unnecessary injury. Most of the injuries arising from the use of the forceps arise from pressure, and the mere termination of a labor by delivery is no evidence that injury has not been done. Skill may often avoid much of it, but there is a certain portion that no amount of skill can prevent.

As pressure causes most of the injury, an instrument that causes but little pressure beyond that which necessarily belongs to the case, is the one that should be used. With these facts in view, Dr. McFerran designed a pair of forceps in the fall of 1877, jointed at the junction of the blades and shanks. He has fully tested them on several occasions after the failure to deliver with other forceps, and always with perfect and quick success, and he can now, with a confidence which experience alone can give, urge a trial of this instrument.

It does not require an expert to use this instrument. Anyone capable of making a correct diagnosis in a case need have no hesitation in resorting to it. The complicated combination of ideas in regard to the diameters of the pelvis, and corresponding ones of the child's head, need not confuse the operator. He only needs to know the anatomy of the pelvis and the ordinary size of a child's head. When once the forceps is applied to the head, it is free to deflect, flex, or extend. The line of traction is transferred from the junction of the head and neck to the joint of the instrument. By making the handles a lever and one hand the fulcrum, placed close to the vulva, the head can be flexed and swept down in the axis of the pelvis, and even when traction is made from the extremity of the handles, the joint leaves the head free to deflect and pass an obstruction with the greatest possible ease.

Dr. Mary H. Stinson, of Montgomery County, read a paper on *The Work of Woman Physicians in Asia*.

Dr. Benjamin Lee, of Philadelphia, then read a paper on *Massage; the latest Handmaid of Medicine;* and Dr. L. B. Kline, of Columbia County, followed with a paper on *Diphtheria*.

Dr. H. C. Wood having been invited to make some remarks as to his views on

diphtheria,

said that during the last three or four years Dr. Henry Formad and himself have been occupying their leisure time with investigations into this subject. In the first place, they attempted to impart the disease to the lower animals. They found that when they took material from an ordinary diphtheria, as it prevails in Philadelphia, they failed; but when they obtained material from the malignant epidemic, they succeeded almost invariably in infecting the lower animals. The symptoms were identical with those occurring in man. There were local pseudo-membrane, systemic infection, and death, with the symptoms of blood-poisoning, and the production of a material which was infectious when passed from animal to animal.

They did not attempt to pass it from animal to man.

But nature has done this. Thus, in a Belgian epidemic, a child inoculated some calves in a dairy; the disease was diagnosticated diphtheria and treated as diphtheria, and some of the attendants took diphtheria while swabbing out the throats of the animals. There can be no doubt that it is possible for diphtheria to be transmitted from the lower animals. He is cognizant of cases in which he believes children took diphtheria from cats.

Drs. Wood and Formad took the diphtheritic membrane, soaked it in water, filtered it through clay by pressure, and the filtrate, consisting of liquid but no solid matter, was found to be innocuous. The solid portion left was very poisonous, and did produce diphtheria. They also availed themselves of a natural filter. As is known, the membrane is filled with a micrococcus, a form of vegetable plant, and the urine of a patient with malignant diphtheria swarms with this germ. They found that if pieces of blotting paper were soaked in this urine, they became more virulent than the membrane itself. This seems to prove that the micrococcus is the cause of the disease. They further took the micrococcus and cultivated it away from the body in soups, and they produced diphtheria with micrococci of the fourth or fifth generation; at least, they were unable to distinguish the disease produced from diphtheria. Here, however, is an objection. They found in ordinary saliva a micrococcus or plant which cannot be distinguished from the micrococcus of the most malignant diphtheria; they were, as far as could be discovered, identical, and in everybody's mouth. They noted that there was a grade in the poisoning power. The micrococcus from a sound throat produced no poisoning, and the severity of the poison was directly as the virulence of the epidemic from which the poison was taken. The micrococcus from ordinary throats failed to grow in culture-fluids. From mild diphtheria there was slight power to grow, while from the virulent it grew rapidly. The membrane exposed to the air gradually lost its poisoning power; when it had lost its poisoning power, the micrococcus no longer grew. Dr. Wood thinks that these researches prove that diphtheria is produced by micrococci that are present in every mouth. It fails to produce diphtheria because it is in an inert condition. This will explain the great controversy which has swept over the profession in regard to contagiousness, and the question whether pseudo-membranous croup is the same as diphtheria.

We know there is a mild and virulent form of diphtheria. A child gets an ordinary catarrhal sore throat. Under the stimulus of a plentiful supply of food, the micrococcus begins to grow. At first there is a simple sore throat, but the micrococcus becomes more and more abundant, or, in other words, the inert plant becomes active and there is produced a genuine diphtheria. In other cases micrococci take on the active state outside of the body, and there is generated an epidemic of malignant diphtheria. A child who has developed diphtheria in itself, throws off some of this diphtheritic poison in an active condition, and you have contagious diphtheria. They found that undoubtedly in the majority of cases the disease is local. They injected the diphtheritic poison directly into the blood, but unless there was a local lodgement, there was no diphtheria. They also traced the mode of entrance into the system. The micrococcus first locates upon the mucous membrane and begins to grow, and inflammation surrounds it. The membrane becomes filled with micrococci, these force their way between the epithelial cells, the cells begin to die, and ulceration takes place; the mouths of the lymphatics open and the micrococci pass in. Hence it is that so early in diphtheria the glands of the neck begin to swell. Early you find no micrococci in the blood, but after the constitutional symptoms have become severe, masses of micrococci will be found in the vessels, and the plant invades the white blood-corpuscles. After a time the white blood-corpuscles will be filled with them, and micrococci will be found everywhere present. They are found in the kidney, filling up the capillaries, forcing their way between the muscular fibres of the heart and all over the body, leading everywhere to the destruction of tissue. They also found something which will throw light upon deaths occurring in many instances, and which leads to the conclusion that diphtheria is not a specific disease at all, and it shows that physicians of forty years ago were right, and observed clinically what we are now demonstrating scientifically. Diphtheria is nothing more than a putrid sore throat, a septic sore throat. We took matter from puerperal metritis, from sloughing sores, from gangrenous wounds swarming with micrococci, not distinguishable from those of diphtheria. These we put in animals and got diphtheria.

When they examined the blood in malignant scarlatina they also found this micrococcus. They could prognosticate almost certainly the fate of the patient by noting whether the micrococci were in the white blood-corpuscle or not. A case of scarlet fever seems to be getting better, the original poison has spent itself, but the sore throat which has been produced has caused a condition of debility, the micrococcus has passed into the blood, and the child has perished from secondary septicæmia. Dr. Wood is sure the time will come when it will be recognized that often such a patient does not die from the original disease, but that the original disease has so weakened the vital forces that the system is unable to resist this septic organism which is always about us, and will ever remain with us.

Dr. Benjamin Lee, of Philadelphia, exhibited

A NEW SPLINT FOR HIP-JOINT DISEASE.

A bar jointed at the hip-joint allowing motion in both antero-posterior and lateral directions. It is provided with a rachet, by means of which extension may be made. It is not attached to the shoe, but has provision for adhesive strips which hold it firmly to the foot. Counter-extension is made by a perineal band. He presented a case which he had first seen in the third stage, and requested that a committee of three be appointed to examine the result of the treatment with the new splint. Drs. Allis, Willard, and Pollard, were appointed as the committee. They afterward reported that, with the exception of being unable to flex his leg beyond a right angle, the patient was in perfect condition.

MEDICAL DIPLOMAS.

Dr. Jackson, of West Chester, offered the following:

Resolved, That a committee of seven be appointed to consider the best method of making a diploma, which permits a man to practise medicine in Pennsylvania, an evidence of real worth. Adopted.

EVENING SESSION.

DR. HENRY H. SMITH delivered

THE PRESIDENT'S ADDRESS,

taking for his theme *The Importance and Usefulness of Scientific Medical Organizations to our Profession and the Public*, and he noted their origin and elementary formation, as described in history; showed in what manner our annual meetings are useful to the profession and the public; and alluded to the reciprocal obligations of the public to the profession.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, April 22, 1884.

THE VICE-PRESIDENT, CHARLES MCBURNEY, M.D., IN THE CHAIR.

COMBINED ŒSOPHAGOTOMY.

DR. SANDS exhibited a specimen of stricture of the œsophagus, removed from the body of a child upon whom he had performed the operation of combined œsophagotomy with a fatal result.

The patient was a girl, two years of age, who was admitted into the Roosevelt Hospital, on January 10, 1884, on account of a cicatricial contraction of the œsophagus, which had followed the accidental swallowing of a small quantity of boiling lye, ten months previously. Considerable inflammation was caused by the action of the caustic fluid, and easy deglutition was never reëstablished. Two months after the accident, the child was extremely weak and emaciated, but by the careful administration of liquid food, consisting of milk and raw eggs, her condition was greatly improved.

Treatment by dilatation was commenced in October, 1883, but was soon afterwards relinquished as impracticable. When admitted into the hospital, she was etherized and carefully examined. Nothing abnormal could be discovered by inspection of the pharynx, or by introducing the forefinger, the tip of which passed below the level of the cricoid cartilage without detecting any constriction. Exploration with elastic urethral bougies, however, revealed the presence of an œsophageal stricture, admitting a bougie two millimetres in diameter, which was felt to be firmly grasped. Larger instruments were arrested at the orifice of the stricture, which was situated at a point thirteen centimetres from the central incisor, and presumably just below the upper edge of the sternum. Considerable sickness and nervous depression followed the administration of ether, and the subsequent attempts to dilate the stricture were made without the use of an anæsthetic. These trials were made at intervals of from one to three days, except during a period of a week, when mechanical treatment was suspended on account of a sharp attack of diarrhœa, which rapidly reduced the patient's strength.

Her weight, which, at the time of her admission, was 22 lbs. 13 oz., fluctuated during the following two months, and once diminished more than two pounds in the course of a week. At the end of two months, however, she had gained 1 lb. 7 oz. Meanwhile, in spite of persevering attempts at dilatation, the stricture had become more narrow, and at last impassable.

Soon after this, treatment was commenced, a bougie three millimetres in diameter was inserted through the stricture and into the stomach; at a later period, smaller instruments had to be employed, and these seemed to cause an aggravation of the dysphagia. Three days before the operation, deglutition ceased, and the child's condition became critical. Dr. Sands decided to resort to combined œsophagotomy, which he performed on March 11th, in the following manner. Ether was administered, and the patient's head was extended and rotated toward the right side, a wine-bottle, wrapped in a towel, being placed under the neck, in order to favor extension, as the neck was very short. An incision, extending from the level of the left sterno-clavicular articulation to that of the middle of the thyroid cartilage, was made along the groove between the windpipe and the sterno-mastoid muscle. The inner edge of the latter being exposed, the muscle, together with the carotid sheath and its contents, was drawn outward by a blunt retractor, while the omo-hyoid muscle was detached and held upward. The dissection was then continued in the direction of the œsophagus, being carried along the outer edge of the thyroid gland and tracheal muscles. On dividing the deep fascia, previously held up and rendered tense by a couple of toothed forceps, the œsophagus was readily uncovered, when it was found to be dilated and hypertrophied. It was opened by cutting with a scalpel between two forceps, an elastic catheter having been previously introduced through the mouth. The catheter was then withdrawn; and, the margins of the œsophageal wound being held apart by loops of silk, exploration by means of bougies revealed a tight stricture, situated two centimetres below the episternal notch. After several trials, this was passed by a filiform silver probe, two-thirds of a millimetre in diameter. On withdrawing the probe, it was found possible to introduce a narrow, grooved director, along which a slender probe-pointed eye-knife, such as is employed in slitting up the tear duct, was guided to the orifice of the stricture, where two shallow incisions were made, one being directed forward and toward the right, and the other forward and toward the left. Neither incision exceeded half a centimetre in length, and very little resistance was offered to the knife. No hemorrhage followed, and when the knife was withdrawn, it was found possible to introduce an elastic catheter four millimetres in diameter, which was tied in the wound, the latter being covered with a dressing of iodoform gauze. The operation was almost free from hemorrhage, and neither of the thyroid arteries was divided.

March 11.—11 P.M. Child very restless and weak. Four ounces of milk injected through tube into stomach.

12th.—8.30 A.M. Temp. 103.5°; pulse 135; respiration 38. Patient has passed a bad night, and has failed to rally. Injected milk ℥iv, brandy ℥j. During the day a small quantity of milk and brandy was injected every hour, with the occasional addition of a drop of laudanum. At 6 P.M. temp. 104.8°; pulse 180; respiration 48.

13th.—Patient continued to sink during night, and died at 4 A.M.

Autopsy.—Twelve hours post mortem. The œsophagus was found to be the seat of an indurated tubular stricture, three centimetres in length, the upper end of which was nine centimetres above the cardiac orifice. The œsophageal wall corresponding to the stricture varied in thickness from three and a half to four millimetres, the calibre being four millimetres in diameter.

Above the stricture the œsophagus was dilated to a calibre of fifteen millimetres in diameter, while below the diameter was eleven millimetres. Above the stricture the œsophageal wall was thickened to the extent of two millimetres and a half; below it measured one millimetre and a half. The effects of the action of the caustic were visible throughout the entire length of the œsophagus, the mucous membrane being in many places opaque, white, thickened, and adherent to the muscular coat. Of the two incisions made at the entrance of the stricture at the time of the operation only one had left a trace; this was found to be about four millimetres in length, and extremely shallow, hardly extending beyond the mucous membrane. The peri-œsophageal tissues at the seat of stricture were healthy and uninjured, and no lesions beside those described were found in the thoracic or abdominal organs. An examination of the specimen showed how slight an incision would sometimes suffice to render permeable a stricture which had hitherto proved impassable; and it was greatly to be regretted that the patient had not sufficient strength to survive the shock of the operation, from which she never rallied.

Dr. Sands also presented a second specimen of stricture of the œsophagus, obtained post mortem from a boy thirteen years old, who died from peritonitis following gastrostomy, and upon whom an unsuccessful attempt had been made to perform combined œsophagotomy. The patient entered the Roosevelt Hospital on February 14, 1884, when he gave the following history: About six months previously he was submerged in a vat containing a solution of caustic soda. The injury was severe, causing numerous ulcers of the skin, loss of sight in both eyes, and a stricture of the œsophagus. Soon after the accident the mucous membrane of the mouth began to desquamate, and a week elapsed before he could swallow liquids. A fortnight later he was able to swallow solid food, although deglutition was painful. Three months before admission dysphagia reappeared, and gradually increased until nothing but liquid could be swallowed. Lately, treatment by dilatation had been resorted to, but without benefit. When admitted he weighed seventy-five pounds, and was pale and thin. Examination of the œsophagus discovered a stricture, through which no instrument could be made to pass, situated eleven inches from the central incisors, and nearly opposite the middle of the sternum. On the following day a filiform whalebone bougie was introduced through the stricture and beyond it as far as the stomach. Dilatation was carefully tried nearly every day during the next four weeks, but without success. On one occasion, soon after commencing treatment, the stricture admitted a flexible catheter, three millimetres in diameter. Usually only smaller instruments could be passed, or the stricture was found to be impassable. By careful feeding the patient's weight increased six pounds; it afterwards diminished slightly as deglutition became more difficult.

18th.—Operation—ether. Head extended, rotated to the right, and supported by a hard, round pillow placed beneath the neck. Incision three inches in length, extending from the level of the middle of the thyroid cartilage, to a point opposite the sterno-clavicular articulation. Inner edge of sterno-mastoid exposed, and omo-hyoid divided, to obtain more room. Superior thyroid artery divided between two ligatures. Œsophagus exposed, and opened after being raised by two forceps—a flexable catheter having been previously introduced through the mouth. Margins of wound in œsophagus held apart by loops of silk, while attempts were made to pass the stricture, which was situated three inches below the episternal notch. All these attempts proved unavailing, as no instrument could be made to engage in the stricture, whether inserted through the mouth or through the œsophageal wound. Silver and whalebone probes, including the finest, and elastic and filiform bougies were tried in turn, without success. Oil was injected into the œsophagus, and an endoscopic tube was passed down to the seat of stricture, in the hope of rendering it permeable, but in vain. The wound was irrigated with bichloride solution and dressed with iodoform gauze; the edges of the œsophageal incision having been previously stitched to the integument, with the view of permitting subsequent exploration.

21st.—Patient fed, since last date, by rectal enemata, and is in fair condition. Stricture still remains impermeable to instruments inserted through the wound, although, yesterday it permitted the passage of a fine whalebone bougie (tip 5 F., shaft 8 F.) introduced through the mouth. It was decided to perform gastrostomy. Operation—ether. Incision an inch and a half long, parallel to, and a finger breadth below the inferior margin of the thorax on left side. Outer border of the rectus was divided to the extent of three-eighths of an inch. Bleeding having ceased, the peritoneum was divided and the forefinger passed into the abdominal cavity readily recognizing the anterior wall of stomach. This being drawn forward, was held in position by a loop of stout silk thread, embracing the peritoneal and muscular coats. The stomach was fastened to the abdominal wall by thirteen interrupted silk sutures, introduced through the entire thickness of the latter, but not penetrating the gastric mucous membrane. The operation performed with antiseptic precautions. Irrigation with solution of mercuric bichloride, 1 to 2000. Silk sutures, prepared according to Kocher's method; iodoform gauze dressing. Patient not being very weak, it was decided to postpone opening the stomach so as to favor adhesion. Nutrient enemeta (Tenbe's beef extract) with a tablespoonful of whiskey every four to six hours.

24th.—Surface of wound in the neck looks gray and sloughy. Patient seems to be losing strength. 9 P. M. Removed dressing from abdomen and found wound apparently in excellent condition. Opened the stomach with a tenotomy knife, making very small wound, equal only to width of blade. First attempts to puncture were unsuccessful, the knife passing between the coats of the stomach and not penetrating its cavity. Introduced into stomach a piece of soft rubber catheter, No. 16 F., which filled the aperture completely, and prevented, at the time, leakage of gastric fluids. The puncture, made without ether, caused no pain. A catheter was tied in position and plugged by a wooden peg. Iodoform dressing removed. Four ounces of milk were injected into the stomach every four hours. Rectal enemata continued every six hours.

26th.—Neck wound in bad condition. Applied carbolized oil (1 to 12) and iodoform.

27th.—Abdominal wound looks badly, most of the

stitches having cut through, and the granulations being bathed in secretions which have escaped from the stomach alongside the tube. Inserted a large flexible catheter, No. 19 F., and packed the wound carefully with iodoform gauze. Patient receives by the stomach three raw eggs daily, and eight ounces of milk every four hours.

28th.—Weaker; slight pain in abdomen; no tympanites; wound in neck continues sloughing, and emits a foul odor. Applied solution of chloride of zinc, 40 gr. ad ℥j.

30th.—Died at 11.55 A.M., having failed steadily, and developed symptoms of peritonitis since last date. Elevation of temperature, 101° to 105° was observed from the time of the first operation.

Post-mortem examination showed an indurated stricture of the œsophagus at the point where it had been discovered during life. It measured about eight millimetres in length, and the thickness of the œsophageal wall corresponding to it was four millimetres. The entire mucous membrane of the œsophagus was blanched, thickened, opaque, and adherent. A bougie three millimetres in diameter could be passed without difficulty through the stricture, just above which the mucous membrane was somewhat uneven and abraded, as if it had been injured by the instruments employed in attempting dilatation. No false passage existed, and the tissues surrounding the œsophagus were normal.

The peritoneal cavity contained a small amount of sero-purulent fluid, and the coils of small intestine were adherent to one another by recent lymph. The adhesions between the stomach and the abdominal wall at the seat of the artificial opening, had partly given way, and the evidences of peritonitis were most marked in this neighborhood. The point at which the stomach had been perforated was situated six centimetres from the pylorus. There was no evidence that the stitches had penetrated the gastric mucous membrane.

Dr. Sands was at a loss to explain his failure to pass the stricture at the time when he opened the œsophagus; but the swelling of the mucous membrane, its uneven surface above the contracted orifice, and the lateral position of the wound in the œsophagus, suggested themselves as possible obstacles to success. He regretted his failure, especially in view of the limited extent of the stricture, which was well adapted for cure by internal division. He was inclined to attribute the fatal result of gastrostomy to the low vitality of the patient, which was illustrated not only by a lack of reparative action in the abdominal wound, but also by the unfavorable condition of the wound of the neck. Perhaps, if the final step of the operation had been deferred until a later period, a better chance might have been afforded for firm adhesion between the stomach and the abdominal wall, but the increasing weakness of the patient seemed to indicate that further delay would probably cause death from inanition.

Dr. McBurney referred to a case which he saw about a year ago, occurring in a lady who had had prescribed for her aromatic spirits of ammonia. There was also standing near the bottle another bottle of the same size and shape which contained caustic ammonia, and one night she accidentally took a tablespoonful of the caustic ammonia solution which gave her very great discomfort at the time, but no bad result whatever followed except the destruction of the mucous membrane of the tongue and inside of the cheeks. He supposed the absence of serious results was due in part, at least, to the fact that only a few minutes before she swallowed the caustic ammonia she had taken a considerable quantity of milk.

Dr. Post referred to a case in which the patient accidentally swallowed a teaspoonful of ammonia, which occasioned great distress for a time, but from which he ultimately recovered.

Dr. Yale referred to two cases in which each of the patients had swallowed a drachm of aqua ammonia without discomfort.

Dr. Sands referred to the case of a jeweler who swallowed a mouthful of nitric acid, and died two or three days after admission to the hospital. At the autopsy it was found that the œsophagus for its entire length, and a large part of the stomach, were in a state of gangrene, the slough being quite deep and involving at least the entire mucous membrane. The mucous membrane in the neighborhood of the laryngeal aperture was thickened, but not sufficiently so to cause death from suffocation. The patient also had broncho-pneumonia in both lungs.

Dr. Markoe said he was inclined to think that the efforts made by Dr. Sands in his case, as he had opportunity to witness them, could not have done any mischief in the way of seriously bruising or otherwise injuring the mucous membrane of the œsophagus. He based this opinion partly on the fact that the manipulation was very carefully performed, and partly on the fact that the mucous membrane of the œsophagus does not easily receive injury. He was still more of this opinion in view of a case in which he operated for the removal of a foreign body, in which the forceps were introduced from the mouth, passed down on two successive occasions, and also a number of other instruments, large and small, were introduced, and the foreign body was seized several times and subjected to traction, with an amount of force which he feared had inflicted considerable injury, but at the autopsy no trace of the operation could be seen. At the time that Dr. Sands was operating he was inclined to the opinion that more force could have been used safely.

Dr. Sands remarked that his idea was that the use of the whalebone bougie which was used for several weeks early in the case had possibly diminished the calibre of the stricture.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 1, 1884.

The Vice-President, Horace T. Hanks, M.D., in the Chair.

Dr. Mary Putnam Jacobi read a paper entitled

SOME CONSIDERATIONS ON ENDOMETRITIS,

the main idea of which was that the greater cycle belonging to the uterus—pregnancy, was precisely analogous in its characteristics to the lesser cycle of the organ—menstruation, and that endometritis was always the result of subinvolution occurring in consequence of the inadequate completion of one or of the other of these cycles. Among the propositions that the writer advanced were the following: The endometrium is the

essential part of the utero-ovarian system. The homology of the two cycles of menstruation and pregnancy, as regards the part played by the endometrium, is complete. In either, if the characteristic products resulting from the physiological process are not fully absorbed, subinvolution ensues. Subinvolution, whether dependent on menstruation or pregnancy, is apt, sooner or later, to result in chronic endometritis. Parenchymatous metritis always depends upon antecedent disease of the mucous membrane. Nearly all utero-ovarian disease may also be traced to the germinal membrane of the endometrium. Ovaritis may be regarded as always secondary to fundal endometritis. The same is true, as a rule, of uterine flexions and versions. The cervix may be primarily affected. With the exception of the development of neoplasms, subinvolution is always the cause of endometritis. The utero-ovarian disease is a result of a deviation of the process of growth. The ultimate aim of treatment must be the restoration of the menstrual cycle to its integrity, and for both the success and safety of the means of treatment it is essential to take into consideration the rhythmical element of the cyclical process.

It is very important to recognize the beginning of trouble, and, thus, slight catarrh becomes a matter of great significance. To study endometritis with advantage, it is requisite to understand the factors concerned in it, and the *modus operandi* of their action. It is a recognized fact that tissues of the highest function are the first to become affected in any pathological process, and hence it is the endometrium that is first implicated in the course of utero-ovarian disease. The development of the parenchymatous changes is comparable to the greater cycle, pregnancy.

After alluding to the peculiarities of the vascular supply, she offered the hypothesis that the accumulation of blood in the periuterine and ovarian plexus of veins causes new growths of the normal mucous membrane of the uterus, when, if impregnation of the ovum took place, the decidua vera becomes formed. If not, the endometrium grows, until it fills the cavity of the organ, when it is arrested by pressure; in consequence of which, also, the capillaries rupture, and the hyperæmic condition is removed. By pressure, too, the further growth of the venous plexus is arrested.

Thus, there is a successive hypertrophy of the endometrium, precisely similar to that of the ovarian cortex; and the endometrium and vesicular membrane of the ovary are physiologically united in the most intimate manner. Endometritis, it is true, is not always accompanied by ovarian disease; but it is extremely rare that the latter exists without concomitant endometritis. The reproductive tissues, she claimed, fulfil no function, and, instead of being an advantage to the general system, are the reverse, and require to be repressed; so that there is a constant antagonism between the system at large and the utero-embryonic element. There are three essentials for normal hemorrhage: First, the complete emptying of the venous reservoir; second, the prompt evacuation of the vessels of the endometrium; and, third, that no distention of the uterine veins should remain. If these conditions are not fulfilled, a venous hyperæmia will remain, and when the next cycle of growth commences, thickening of the membrane will occur, because a portion of the new growth incident to the menstrual cycle still remains. From a succession of such processes, chronic endometritis of the catarrhal, vegetative, or other type, will eventually result. Three symptoms were stated to be pathognomonic of endometritis, viz.: First, excessive pain on the passage of a probe into the uterine cavity; second, hyperæmia, as indicated by the hemorrhage resulting from the introduction of the probe; and, third, sensitiveness of the fundus to abdominal pressure. Dysmenorrhœa is a so usually present, especially if the os internum is closed. The existence of such a thing as ovarian dysmenorrhœa, was denied by the writer, who claimed that the pain resulting from ovarian disease reaches its maximum during the week preceding menstruation, and is relieved when the flow came on.

In the treatment of endometritis, it is of paramount importance to recognize the rhythmic character of the uterine function, and the limits of danger, it was believed, are not sufficiently defined. For two weeks before the occurrence of menstruation, the writer held, it is best not to make any intrauterine application, as she considered that after the close of the first week following the menstrual flow, the danger of exciting periuterine inflammation commences.

One of the important results of endometritis is flexion of the uterus, which is caused primarily by softening of the stem of the organ. The uterus is surrounded by a mass of fibro-muscular structure similar to its own, and, indeed, of which its parenchyma is only a more condensed portion. Now the special characteristic of this kind of tissue is the tendency to contract, and, hence, when the uterine stem becomes softened, as the result of endometritis, anteflexion or anteversion may be caused by the contraction of the round ligaments. Retroflexion, on the other hand, is the result of a paresis, the essential prerequisite for which is relaxation of the round ligaments. With retroversion there is also relaxation of the utero-sacral ligaments. Prolapsus depends on total relaxation of all the uterine ligaments.

The essentials of any efficient treatment of chronic endometritis are the destruction of the new products resulting from the continued duration, from the normal process in the menstrual cycle, and the restoration of that normal process. In the first place, therefore, whatever would tend to raise the arterial tension throughout the system, and especially in the pelvic tissues, is of service, and among the agencies of this class mentioned were hydro-therapeutics, counter-irritation, faradization, gymnastics, and the health-lift. Secondly. Local treatment of the coexistent endocervicitis is required. The dissipation of the hyperæmia of the cervix might have such an effect on the endometrium that it would not be necessary to make local applications to that. Thirdly, direct applications to the endometrium. In regard to the propriety and value of such applications a violent controversy has been excited, and different authorities have lauded special agents. The good effects of this procedure in suitable cases, and when properly carried out are, first, destruction of the abnormal growth accumulated; second, contraction of the parenchyma through reflex nerve action; third, compression of the bloodvessels; and, fourth, the moderation of the growth during the succeeding menstrual cycle. The

dangers of intrauterine applications were stated to be: first, the production of uterine cramps; second, the implication of the periglandular lymphatic spaces; third, the production of periuterine inflammation; and, fourth, the propagation of inflammatory trouble to the ovaries. The strong mineral acids, particularly nitric and chromic, are preferred by the writer, as a rule, and it is frequently necessary to dilate the uterine canal by means of tents. Every application to the endometrium is to be regarded in the light of a surgical application, and it should always be made at the home of the patient, who should remain in bed for three days, if a tent has been employed, and for one day, if not. If the application has done good, its benefit will be manifested in the diminution of the leucorrhœa, and in the abatement of the pains in the back and hips; while the next menstruation will be less painful. Intrauterine applications should never be made unless the patient suffers from some form of dysmenorrhœa.

Dr. Mundé thought that it was of the utmost importance to commence the treatment early, since the longer the case progresses the more difficult it is to cure, and the more liability there is to have it complicated with pelvic cellulitis or peritonitis. When the latter conditions are present it is essential, if a cure was to be made, to cure the coexisting endometritis on which they depended; but at the same lime it is not to be forgotten that there is always danger of intrauterine applications setting up additional periuterine inflammation. He differed from the author of the paper in the opinion that parametritis is principally dependent on endometritis at the fundus, as in his own experience he has found it much more frequently associated with disease of the cervix, and he believed that this is due mainly to the fact that the lymphatic connection is more close with the cervix than with the fundus. The same facts are true in reference to ovaritis; so that he is always afraid to treat disease of the cervix if the ovaries are affected.

TEXAS STATE MEDICAL ASSOCIATION.

Sixteenth Annual Meeting, held in Belton, Texas, April 22, 23, 24, and 25, 1884.

(Specially reported for The Medical News.)

The Association convened in the Belton Opera House, and was called to order at 10 A.M., April 22d, by The President, Dr. A. P. Brown, of Jefferson.

The President, in some well-timed remarks, urged that it was the duty of the State to regulate the practice of medicine and surgery. He advocated the organization of a library and museum for the Association, and advocated a National pharmacopœia authorized by the General Government. Upon all these subjects committees were appointed to consider, and report such action as would be to the best interest of the people and the profession.

Dr. R. W. Park, of Waco, in the evening delivered a learned address on *Evolution*.

The President delivered his

ANNUAL ADDRESS

on the second day, giving a graphic *résumé* of the work of the fathers of medicine, showing the honor due them and the exalted position we now occupy as a result of such a foundation of facts in science.

Dr. R. M. Swearingen delivered an eulogy on the life and death of

DR. T. D. MANNING,

who sacrificed his life at Holly Springs during the epidemic of yellow fever in that city.

Dr. T. H. Nott, of Goliad, made some remarks upon the life of

DR. J. MARION SIMS,

and offered appropriate resolutions. On motion, $100 were donated to the Sims memorial fund.

A resolution adhering to

THE CODE OF ETHICS

of the American Medical Association, and approving the course of the New York physicians in severing from the State society and organizing an association in sympathy with the American Medical Association was unanimously adopted.

Bills regulating the practice of medicine and organizing a State Board of Health were presented and discussed and referred to the Committee on Legislation.

In the Sections, thirty-five papers were presented.

Dr. J. M. Willis read the report of a special committee on

THE MINERAL WATERS OF TEXAS,

giving the results of his investigations and inquiries in reference to some of them, notably Wooten's Wells, of Robertson County; Sulphur Springs, of Hopkins County; Lampasas Springs, of Lampasas County; McGregor Springs, Palo Pinto Springs, Sour Wells, and Sour Lake. All of these waters were more or less valuable for various chronic diseases.

Dr. C. M. Trueheart, of Galveston, reported a case of

PERIOSTEUM GRAFTING,

in which he removed the periosteum from a dog and transferred it to a man, with the result of the development of three and a half inches of the clavicle.

Dr. H. W. Dudley, of Hillsboro, read an article on

ANIMAL LIGATURES

made from the "Texas mule-eared rabbit," as superior in finish and elasticity to any he had ever seen.

REPORTS.

Dr. W. J. Burt, as Chairman of the Committee on Publication, reported the printing and distribution of four hundred copies of the *Transactions* for 1883; and, as Secretary of the Association, a prosperous condition of the same, and noting favorable mention from many correspondents and medical journals.

Dr. J. Larendon, Treasurer, reported a balance of $2165

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. H. C. Ghent, of Belton.

Vice-Presidents.—Drs. E. P. Becton, of Sulphur Springs; H. H. Darr, of Caldwell; and M. Matkin, of Hearne.

Secretary.—Dr. W. J. Burt, of Austin.

Treasurer.—Dr. J. Larendon, of Houston.

After which the Association adjourned, to meet in Houston, Texas, on the fourth Tuesday in April, 1885.

CORRESPONDENCE.

TUBERCULAR TUMORS OF THE LARYNX.

To the Editor of THE MEDICAL NEWS.

SIR: In THE London letter to the NEWS of May 17th (p. 597), is a description of the interesting case of tubercular tumors of the larynx, presented at the Clinical Society of London, by Dr. Percy Kidd, who is reported to have "searched literature in vain" for the record of a similar case.

The existence of well-defined, solitary tubercular tumors of the larynx and trachea, occurring independently of ulceration of the surrounding mucous membrane, and histologically distinct from the granular and papillomatous growths so frequently observed in the larynx of the phthisical, was first pointed out by your correspondent in a paper read before the Clinical Society of Maryland (*vide* abstract in *Maryland Medical Journal*, June 1, 1882), and published subsequently in the *Archives of Medicine*. (Tubercular Tumors of the Windpipe; Tuberculosis of the Laryngeal Muscles, etc., *Archives of Medicine*, October, 1882). Prior to that date, such neoplasms had not been described, nor had a case been recorded, the tubercular nature of which had been demonstrated by the microscope.

In the paper referred to, two cases were reported: a growth of the trachea, and a remarkable, diffuse nodular tumor covering the entire vestibule of the larynx, and ceasing abruptly at the free borders of the ventricular bands. Microscopical examination showed the growths to consist of a mass of clearly defined, closely aggregated miliary tubercular nodules, separated from each other by hyperplastic connective tissue, and representing all stages of degeneration. In some, caseation had so far advanced, that microscopic vomicæ were found. The growths seemed to have originated in the submucous tissue, and the nodules in the deeper portions were further advanced in caseation than those which were more superficial. In neither case was there any evidence of ulceration in the upper air-passages.

I am yours very respectfully,
JOHN N. MACKENZIE, M.D.

BALTIMORE, May 20, 1884.

NEWS ITEMS.

CINCINNATI.

(*From our Special Correspondent.*)

MEDICAL COLLEGE OF OHIO.—At a recent meeting of the Faculty of this Institution it was decided to hold a preliminary examination of all candidates for admission, excepting those who can furnish a diploma or other evidence of sufficient literary training. A course of lectures on hygiene was also arranged to be delivered by Dr. Frederic Kebler, now Lecturer on Pathology.

At a late meeting of the Board of Trustees of the College, the Hon. M. F. Force, Judge of the Superior Court, was elected President of the Board, *vice* the Hon. Flamen Ball, who had tendered his resignation, after thirty-five years' service as a trustee, during twenty-three of which he was president. A banquet was given by the Faculty in his honor.

YELLOW FEVER.—There have been twelve deaths from yellow fever at Havana during the week ending May 17. Consular reports from Rio de Janeiro for the week ending March 29, show thirty-three deaths from yellow fever and four from pernicious fever. The consul says: "Though some deaths from yellow fever have occurred from amongst the shipping, the yellow fever has not become epidemic, and there is reason to hope that this port will, for this year at least, escape such a scourge." For the week ending April 5, there were forty deaths from yellow fever and nine from pernicious fever at Rio, and the consul says: "The weather during the week has been cool and pleasant, with frequent showers."

BOWDOIN MEDICAL ALUMNI ASSOCIATION.—The first annual meeting of this Association will be held in Memorial Hall, Brunswick, Wednesday, May 28, at 1 P.M. An address will be delivered by Dr. A. J. Fuller, of Bath, Class of 1841, and a banquet served. A large attendance is already assured.

All graduates of the School who have not received a special notice are requested to communicate at once with the Secretary, Dr. Chas. D. Smith, Portland, Maine.

THE STILLÉ DINNER.—In respect to the memory of the late Dr. Gross, the complimentary dinner to Prof. Stillé has been postponed to June 5.

MCGILL UNIVERSITY.—The annual commencement of this institution was held on March 29th. The degree of M.D. was conferred upon thirty-four graduates.

BISHOP'S COLLEGE.—At the annual convocation of the Faculty of Medicine of the University of Bishop's College, held on April 3d, the degree of C.M., M.D. was conferred upon ten graduates.

NOTES AND QUERIES.

CORRECTIONS.

To the Editor of THE MEDICAL NEWS.

SIR: In the summary of the Report on Vivisection in the May 17 number of THE MEDICAL NEWS, we are made to say that the Indian Government sent money to Philadelphia to carry on researches on serpent venoms. The facts will appear in the report, but I desire at once to correct a statement which would certainly excite comment in England.

Last year, at my request, Mr. Frelinghuysen, Secretary of State, addressed Her Majesty's Indian Government in regard to our researches on venoms. A sum of money was devoted to aid in collecting the poison of Indian serpents, and orders were issued to certain army physicians in regard to the matter. As a result, we have been able to continue the researches which at one time Lauder Brunton was successfully prosecuting, until the Vivisection Act in England put an end to his work.

Yours truly,
S. WEIR MITCHELL,
Chairman.

May 17, 1884.

To the Editor of THE MEDICAL NEWS.

SIR: In your report of the proceedings of the American Laryngological Association, published in THE MEDICAL NEWS of May 17, I am credited with the exhibition of new forms of the tonsillotome and uvulatome. Permit me to plead "Not guilty." The responsibility for these ingenious additions to the pharyngological armamentarium rests with my friend, Dr. Charles E. Sajous, of this city; in justice to whom I would request the insertion of this correction in the forthcoming issue of THE MEDICAL NEWS.

I am, Yours respectfully,
S. SOLIS COHEN.

1431 WALNUT STREET, PHILA., May 19, 1884.

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIV. SATURDAY, MAY 31, 1884. NO. 22.

ORIGINAL ARTICLES.

SCARLET FEVER OF THE FŒTUS IN UTERO, AND OF THE MOTHER AT THE NINTH MONTH OF PREGNANCY.[1]

BY CHARLES A. LEALE, M.D.,
OF NEW YORK.

SCARLET FEVER of the fœtus in utero so seldom occurs that many physicians of extensive experience, and several writers on the diseases of children, doubt the possibility of its occurrence in the unborn child, and intimate that the reported cases are those in which probably a mistaken diagnosis has caused the physician to call the usual redness of the entire skin of the newly born child, a disease which we recognize as caused by a special poison which alone can produce scarlet fever. Having had the sad experience to witness the occurrence of this malignant malady in a young family, a week after the arrival and unpacking of woollen garments belonging to a visiting relative at the time suffering from severe tonsillitis, and who had just left a house in another city, where a recent death followed throat disease and scarlet fever, induced me to warn the profession of the danger, and give a brief review of the literature of this disputed subject.

The New York family comprised the father, aged twenty-five years, the mother, aged twenty-four years, an only child, a son, aged four years, and the monthly nurse, aged fifty years, all of whom were in excellent health before the arrival of a visiting relative who had just left a house where scarlet fever was present, and who, at the time, was suffering from a form of laryngitis we so often see present in those who have been where scarlet fever existed, but yet escape the usual course of the disease.

Of this family the father was the only one known to have had scarlet fever, and subsequently proved the only one to escape, while all the other members of the family passed through the different stages of the disease, the scarlet fever being communicated to the unborn child, who at birth was unmistakably in the midst of the eruptive period simultaneously with its mother, and as the attending physician, for several weeks prior, had not seen the disease, nor had any other member of the family known of it for years in that part of the country where they had resided, it may logically be inferred that the specific *materies morbi* was thus conveyed by this visiting relative, proving fatal to the mother on the third day of the eruption, fifty-six hours after delivery, and nearly so to the fœtus in utero; was very severe in their son; and, subsequently, nearly fatal to the attending aged female nurse.

[1] Read before the New York County Medical Association, April 21, 1884.

The importance of calling attention to the danger of scarlet fever to the parturient woman, received a new impulse when I read in the *Journal of the American Medical Association*, this afternoon, dated April 19, 1884, an article on "Scarlatina as a Cause of Puerperal Septicæmia," copied from another medical journal, and therefore spread broadcast before the profession of the country, where instances are related where a woman was confined in the same bed with a patient having scarlet fever, without the occurrence of any ill effects; also, where a medical man left a case of scarlet fever to attend two cases of midwifery; and another, who, "with hands freely peeling from scarlatina," attended three cases of confinement, and that not one of these cases had anything the matter subsequent to confinement.

The differences between septicæmia and scarlet fever are as distinct as those between measles and smallpox; and the instance to be related this evening, where the mother, infant, and nurse, all contracted scarlet fever, is unlike anything occurring where the originating cause is septicæmia.

The accumulated evidence of a number of European and American observers and writers on scarlet fever, strongly demonstrates its occurrence in the child at birth. Under the name of scarlet fever, however, we do not place those severe forms of septicæmia which produce an eruption of a scarlet character, and are followed by so many of the sequelæ seen after scarlet fever, but include those cases only in which the cause is due to the recognized special influence capable of reproducing a disease of like manifestation, and continuing in successive generations to reproduce a similar morbid condition. Physicians of very large experience have stated that they have never met with a single instance, and refer to articles in print as arguments in their favor, but we who have been brought face to face with epidemic scarlet fever during childbirth, have to respond that experience has taught us the lesson that it does occur, and as it is so very fatal to the young mothers, it is our duty to warn all practitioners of the extreme danger of exposing a pregnant woman to any of the eruptive diseases.

At a meeting of the Obstetrical Society of Philadelphia, held April 3, 1884, Professor Parvin stated that children have been born with measles, but he had not known of such an experience with scarlet fever.[1]

The earliest ages at which Meigs and Pepper[2] have seen scarlet fever well marked was once at twenty-one days, once at five months, and twice at six months, while of the 148,829 cases collected by Murchison from the death returns of Great Britain, 9999, or about seven per cent., were under one year.

[1] Report of Proceedings by Dr. W. H. H. Githens, Am. Med. Asso. Journal, April 12, 1884.

[2] Meigs and Pepper, p 666, 1870.

Vogel[1] states that very young children are but rarely subject to the fever, and only become affected by it in severe epidemics. In New York City[2] during the past year, 1883, out of a total of 744 deaths from scarlet fever, 67 were under one year old.

CASE I.—Jan. 9, 1875, an otherwise healthy boy was born near the end of the ninth month of intra-uterine life, at about the middle of the eruptive stage of scarlet fever; the entire cutaneous surface was of the dark purplish-red color of the congestive capillary stage of the disease, the mucous membrane of the mouth and fauces was intensely hyperæmic, the characteristic raspberry appearance of the tongue (enlarged papillæ) existed to an unusual degree, and the increased febrile movement and rapid heart-action indicated that life was in danger from the effects of acute blood poisoning. The child at birth weighed nine and a half pounds, avoirdupois, was well developed, but made no effort to inspire. Immediately after birth it was laid on its side, was alternately sprinkled with hot and cold water, then rubbed along the spine; failing thus to induce breathing, and in order to relieve cerebral and hepatic congestion, which was very apparent, about an ounce of blood was allowed to escape from the umbilicus with the immediate noticeable effect of relieving the cerebral and hepatic stasis. The mouth and air-passages of the child were so filled with tenacious mucus that it was impossible to breathe. The nose and buccal cavity were quickly cleansed by a wet towel over the finger, and the accumulation beyond the reach of the finger I drew up by placing a porous towel over the child's face and completely encircling the infant's nose and mouth by my lips, then taking a gentle inspiration, followed by an expiration, which, from the first, was seen to force air into the lungs of the child. This, with pressure on the abdomen and lower part of thorax, together with flagellations to the nates, friction to the spine, was continued for fifteen minutes before the child was sufficiently strong to perform independently the necessary respiratory function.

It was then wrapped in warm flannel, laid on its right side, and at the end of an hour had become sufficiently strong to receive only a superficial bath.

The congestion of the fauces was so great that for the first three days of its life it could only swallow a few drops of liquid at a time. The eruption continued over the entire surface of the body for seven days, the skin at times assuming a dark-purplish color, which would disappear on pressure, leaving a white line for a few moments on the skin, after a finger had been gently drawn over it. At the end of the first week the throat symptoms improved, and the infant was able to swallow teaspoonfuls of liquid food. No diphtheritic exudation followed, and the muscles of deglutition subsequently showed no signs of paralysis.

The period of desquamation commenced about the tenth day after birth, when the cutis of hands, feet, back, and chest exfoliated in many places in pieces of from one to two inches square, and continued to be thrown off for the next week; during this time desquamative nephritis occurred, the urine[1] containing at times as much as one-tenth albumen; general anasarca followed about the fourteenth day and continued for nearly a week. After the subsidence of the œdema, convalescence commenced and continued until the end of the fourth week, when the child was apparently well, and could eat and digest its artificial food as other robust children of the same age. The recovery was complete.

Dr. W. T. Taylor[2] reports a case of scarlet fever in a mother two days after labor, proving fatal in two days. The child lived.

Prof. Louis Thomas[3] mentions two instances where Murchison observed the birth of healthy children by women who at the time were suffering from scarlatina, and that Elsässer also reports that a primipara, twenty-six years old, and already affected with the eruption, bore a healthy boy, concerning whose fate nothing is said, so that he probably recovered, while the mother died four days after.

Prof. J. Lewis Smith[4] states that although cases have been reported of scarlet fever occurring in the fœtus and manifesting itself by the usual signs at birth, yet a clear diagnosis in such instances is necessarily difficult on account of the character of the scarlatinous eruption on the one hand, and the nature of the cutaneous circulation on the other, and concludes that probably in the cases there were errors of diagnosis.

Dr. William C. Roberts[5] in an article on the diseases of the fœtus in utero, in the year 1839, states that scarlatina has never, he believes, been known to affect the fœtus in utero.

"According to Noirot,[6] Baillou, as early as 1574, established the occurrence of such cases; and Ferraris has also published an undoubted case. Tourtual reports the case of a woman, thirty years old, who had never had scarlatina, and who, after nursing her husband and son—both of whom were sick with the disease—during the eighth month of her pregnancy, up to shortly before her delivery, was delivered of a boy on the 19th of September, 1823; the child could not swallow, and had an uncommon redness of the skin, which Tourtual did not hesitate to consider as a characteristic eruption of scarlatina, the more so as also the tongue and mucous membrane of the mouth were of a glistening red color. The difficulty of deglutition lasted to the fifth day when the child drank eagerly, and on the ninth day abundant desquamation commenced just as in older children; later, also, a separation of the nails of the fingers and toes took place; the child recovered completely. During an epidemic of scarlatina a son was born to Gregory on April 23, 1839; the child was clearly suffering from some form of fever, and on the following day had a decided angina maligna without an exanthem, as a result of which the child emaciated and died on May 1. Stiebel tells us that a woman, twenty-five years old,

[1] Vogel on the Diseases of Children, Dorpat, Russia; translated and edited by H. Raphad, M.D., p. 481.

[2] Letter from Dr. Nagle to Dr. Leale, April 16, 1884.

[1] An easy method to secure the urine from a very young infant is to have a vessel ready while giving the usual bath, watch for the opportunity which so frequently then occurs, and while holding up the child allow the urine to flow directly into the receptacle.

[2] Journal Am. Med. Assoc., April 12, 1884.

[3] Cyclopædia of the Practice of Medicine, Dr. H. Von Ziemssen, vol, ii. p. 182.

[4] Treatise on the Diseases of Infancy and Childhood, Second Edition, p. 186.

[5] American Journal of the Medical Sciences, vol. xxvi., 1839, p. 371.

[6] Ziemssen's Cyclopædia of Medicine, vol. ii. pp. 181, 182. Prof. Thomas on Scarlatina.

manifested a very abundant eruption of scarlatina toward the end of her pregnancy; after birth, the child could not swallow for several days, the skin was of a scarlet-red color, and desquamated in larger scales than usual."

According to Hüter, a woman, who four days after delivery died of metro-phlebitis during an epidemic of puerperal fever, gave birth to a child "præclare scarlatina in stadio florescentiæ affectus."

Meynet[1] tells of a woman who, three weeks after the convalescence of her husband and three months after the death of her child from scarlatina, was delivered of a girl, who was somewhat red when born; the redness became more intense on the following day, and the skin felt very hot. These symptoms diminished after a few days, but again became more intense on the thirteenth day; on the fifteenth day Meynet noticed the well-developed redness of scarlatina on the whole body, tongue, and palate; the tonsils were swollen, and there were fever and apparent difficulty of deglutition. On the seventeenth day the redness had almost entirely disappeared, and the general condition was good; but as during the subsequent fortnight desquamation did not appear, Professor Thomas thought the case somewhat doubtful, as also the case of Asmus in which desquamation followed a case of supposed scarlatina of the fœtus, yet he argues that here, although the desquamation was very extensive, it frequently appears in healthy new-born children, in whom there is no suspicion of scarlatina. Asmus's case is as follows: A mother had lost two children towards the end of her pregnancy from scarlatina, and soon after her confinement became dropsical. In her new-born child, who was very much emaciated, the epidermis over the whole body separated in large sheets—from the hands it came off like gloves; the child afterwards recovered completely. Noirot states that Potier observed that a woman "took scarlatina on the morning of the day of her confinement, and died a fortnight after, and that her child, though immediately isolated after birth, nevertheless became affected with intense scarlatina, but recovered completely."

Prof. A. Trousseau[2] informs us that in 1828 he, with Drs. Ramon and Leblanc, were sent by the Minister of the Interior to study the epidemics and epizootiæ prevalent in old Sologne, that part of France which lies between the rivers Cher and Loire, extending from Blois to Gien, and saw occurring simultaneously with severe cases of scarlatina numerous cases of membranous sore throat, and that scarlatina was particularly severe at Cour-Cheverney, a commune situated four miles south of Blois, and it had proved so specially fatal to puerperal women, that even the very poorest were leaving the place and going to Blois to be confined. The district physician informed the Committee that he had lost nine cases. Prof. Trousseau further remarks that puerperal epidemics are very rare in country places, and, generally speaking, pregnant women are proof against epidemic influences, but in thirty-six cases the scarlatinous eruption showed itself in forty-eight hours after delivery, and in a few days the patients died.

Prof. Ernst Wagner,[1] of Leipsig, tells us that during pregnancy everything that is transportable in the mother's blood may be carried to the fœtus, and that in this way the mother's anæmic state may harm the child. Syphilis and smallpox, seldom scarlet fever, measles, dysentery, typhoid fever, intermittent fever, and even tuberculosis and cancer may be communicated to the fœtus. Wagner even goes further when he states that the fœtus may experience several affections, smallpox, for example, without the mother's participation.

The remarkable increase of deaths from scarlet fever cannot be more forcibly illustrated than by reviewing the annexed statistics of the New York Health Department,[2] where we find that for the twenty-five years before 1829, the total number of deaths from scarlet fever in New York was only one hundred and eleven, while we find in the three months of 1829 (viz., October, November, and December) a sudden increase to one hundred and twenty-four, or thirteen more deaths from scarlet fever occurred during these three months than for the entire preceding twenty-five years, an increase which, City Inspector John Coffin states, caused such alarm among the people, that in consequence the medical profession were earlier and more frequently called to treat a disease in which they were "providentially successful," showing that a very large proportion of those attacked recovered.

Hillier states that during the eighteen years from 1848 to 1866, the deaths from scarlatina in London amounted to 52,461, and Meigs[3] and Pepper inform us that for a series of years (1809 to 1868 inclusive) there were 13,016 deaths returned from scarlet fever in Philadelphia.

During the last eighty years, 37,271 deaths from scarlet fever were recorded in New York City, and the slowness of its increase is worthy of notice in studying its epidemic character, for, commencing in 1804, we have 14; never to exceed 5 for twenty years; while only 3 deaths occurred in the year 1824. The remarkable increase in 1829 to 188, and in 1882 to 2066 deaths from scarlet fever, is suggestive of other causes than those due simply to epidemic influences.

During the past twelve years, although we have passed through several severe epidemics of scarlet fever, I have seen only one case in which the disease developed itself in the fœtus in utero (the one mentioned, and which recovered). Yet I have seen three cases of undoubted puerperal scarlatina: two in my own private practice, one as before mentioned having died, while the other recovered after having the most profound symptoms of a severe attack, followed by desquamation of the skin and nails, a complete loss of hair, and a long, tedious convalescence covering several months, but followed by a complete recovery. The third case of scarlet fever at childbirth was in a patient of the late Dr. Peaslee, residing in West 56th Street, whom I was requested to see while she was in

[1] Ziemssen's Cyclopædia of the Practice of Medicine, A. H. Buck, M.D., American Edition, vol. ii. p. 181.

[2] Trousseau, Clinical Med., vol. ii. p. 202, translated by Dr. J. R. Cormack, edition of 1868.

[1] General Pathology, translated from sixth German edition by Drs. Van Duyn and Seguin, 1876. p. 42.

[2] Records of Health Department of New York.

[3] Profs. Meigs and Pepper, Diseases of Children, p. 666, 1870.

convulsions. She was covered with the eruption, and Dr. Peaslee told me that he considered it an unmistakable case. This patient died on the third day after delivery. Her child died about two minutes after birth; it was remarkably well developed and large, but could not be made to breathe on account of accumulations of mucus in the fauces.

I have in vain endeavored to learn the number of deaths in New York City from scarlet fever during pregnancy and during the puerperal state, also those occurring at birth; but find that out of the total of 744 deaths from scarlet fever in 1883, 67 were children under one year, and 19 in females during the years she is capable of bearing children. The annexed table with a letter from Dr. Nagle of the New York Health Department, was received in answer to my inquiry.

I regret to inform you that I am not able to give you the information you desire. I do not think that physicians are in the habit of adding the word "pregnancy" as a complicating cause of scarlet fever. I take pleasure, however, in sending you a list of the deaths from scarlatina in females between the ages of fifteen and forty-five years, and also the deaths of children under one year old from scarlatina.

Deaths from scarlatina in New York City during the year ending December 31, 1883:

Total deaths from scarlatina, all ages, . . .	744
Total deaths of females between 15 and 20 years old,	6
" " " " 20 " 25 "	4
" " " " 25 " 30 "	6
" " " " 30 " 35 "	2
" " " " 35 " 40 "	1
Total, ...	19
Deaths of children under 1 year old from scarlatina,	67

Case II. *Scarlet fever at the end of the ninth month of pregnancy.*—I carefully examined this lady, aged twenty-four years, when she called at my office, at the end of the eighth month of pregnancy, and found her in perfect health. She stated that she had always been remarkably well, not even having had during her younger life any of the diseases of childhood. She attributed her freedom from disease to the sanitary precautions of her parents, and to the healthful surroundings of her country home in central New York. Her married life had also been exempt from the frequent ills usually incident to pregnancy, and the birth of her first child, which took place at her country home, had not in any manner impaired her health. Her boy, aged four years, also presented all the evidences of perfect health; in fact, when I looked at the father, mother, and son, all in the condition of such vigor, I remarked that surely, with his bright prospects in business, he also had in other respects an excellent commencement in life. But he had removed from a residence in the country, where he always had had an advantage of fresh air, and good, wholesome food, and came to New York City to live in a French flat, where all the sleeping rooms were dark and badly ventilated, the rooms were furnished extravagantly, and the little sunshine was prevented from entering the front of the house by the heavy curtains covering the windows. The rent greatly exceeded that of a pleasant house in the suburbs, but to be near the place of business was the first consideration. The sacrifice to ambition was too great, as subsequent events proved. I heard nothing unfavorable until January 9th, when I was informed that their son, aged four years, was dangerously sick with scarlet fever, and on immediately visiting him, found that his mother also had the eruption commencing to appear on the chest and abdomen, while the mucous membrane of the posterior fauces was intensely hyperæmic. In a few hours her entire body was covered with the eruption of malignant scarlet fever, and the fœtus, from its violent motions, appeared to be in convulsions, thereby causing the anxiety of the mother to be increased to an alarming degree, until she became delirious, when I saw the absolute necessity of quickly delivering her to save either the mother or the child. Gradual digital dilatation of the closed os uteri soon produced the desired effect, and in four hours I applied the forceps, causing an easy delivery of a large boy; the placenta was removed without difficulty, and the moderate amount of post-partum hemorrhage relieved the cerebral congestion to such an extent that the mother was restored to consciousness; the uterus contracted firmly, and careful examination showed that no injury had been done by the induced labor. Improvement continued for the twenty-four hours after delivery, when the temperature again increased, and her skin became of a dark-purple color.

Jan. 10th.—10 A.M. Pulse 160; temp. 105¼° Fah.; resp. 44, very much oppressed; delirious.

10½ P.M. Pulse 142; temp. 105¼°; resp. 48. Skin and mucous membrane dry and purple, kidneys acting well, great prostration from feeble heart-action, and increased delirium.

11th.—10 A.M. Pulse 144; temp. 106½°; resp. 48. Skin of a dark-copper color, excretion of urine abundant, lochial discharge sufficient, delirium increased; the heart's action grew more feeble until exhaustion caused death at 8 P.M., fifty-six hours after delivery. After death the body became black in patches from the extravasation of blood from the ruptured, congested capillaries, her face began to swell, and in a few hours she was beyond recognition, and decomposition rapidly advanced.

The aged monthly nurse was now stricken with the disease. She and the boy recovered, and the house was thoroughly disinfected by the New York Health Department, and no subsequent case occurred there.

Scarlet fever is not nearly so fatal when it occurs more than a week after labor, as when it appears before or simultaneous with child-birth. During the past twenty years' practice, I have observed one such occurrence, when the eruption appeared on the eighth day after labor; in this instance the mother recovered. The infant was not affected by the disease.

Conclusions.—Scarlet fever may attack the fœtus in utero.

The large proportion of children born with scarlet fever recover.

Scarlet fever of the newly born child has like manifestations as when it occurs later in life.

Scarlet fever may attack the woman during pregnancy and also immediately after childbirth.

Scarlet fever is exceedingly fatal to the woman during pregnancy and during parturition.

Scarlet fever rarely, if ever, affects the parturient woman if she has had a previous attack.

Scarlet fever causes death in the parturient woman by coma, exhaustion, or by convulsions.

Scarlet fever being a self-limited disease, is best treated by relieving dangerous symptoms, and in accordance with the rules of hygiene.

Scarlet fever only exceptionally occurs during the ages that women bear children; therefore, the proportion of those liable to contract the disease during pregnancy and childbirth, must necessarily be small.

Scarlet fever and septicæmia are distinct diseases, being unlike in many respects.

REPORT OF A CASE OF ŒSOPHAGOTOMY FOR THE EXTRACTION OF A SILVER FIFTY-CENT PIECE, FOLLOWED BY RECOVERY.[1]

BY FLEMING HOWELL, M.D.,
OF CLARKSBURG, W. VA.

ON March 22d, I was called to Bridgeport, to see Myrtle K., aged eleven, who in playfully attempting to hide a silver fifty-cent piece from her little sister, had thrown it into her mouth; where it had gone beyond her reach and became lodged in the throat.

I found her comparatively comfortable, suffering no pain, except in the acts of swallowing, which came on involuntarily every few minutes. I learned that for several minutes after the accident occurred, there had been great difficulty of breathing, stridulous voice, etc., this, however, at my arrival had entirely passed off. Soon after the accident free emesis occurred, and she vomited apparently as much as she had eaten at the previous meal. I could detect nothing with the finger introduced into the pharynx, though I was able to explore this organ pretty thoroughly beyond the opening of the glottis. With the sound, however, I readily touched the coin, and ascertained that it was over eight inches from the opening of the mouth. With the finger applied externally and pressed down deeply at the side of the trachea, I could sometimes indistinctly feel the foreign substance. By these conjoined manipulations I located the body in the upper part of the œsophagus somewhat below the cricoid cartilage.

As free emesis when the stomach contained considerable solid substance, and before the coin had become so firmly impacted, had failed to dislodge it, I decided it would be useless to resort to this means; but during my manipulations violent retching came on, which I took opportunity to aid by inverting the body, but without any result. I next used the œsophagus forceps, but the coin was beyond the point for the satisfactory manipulation of this instrument. With a blunt hook improvised from a uterine sound, I two or three times got a hold and once very firmly when I used force, gradually increased until I feared I would injure the parts, and hesitated, when the instrument slipped off and I was not able to secure the same good hold again, though the little girl seconded all my efforts with remarkable self-control and determination. Having now exhausted all the resources at hand, and having been forced to the conclusion that an operation would most likely be necessary, I sent for Dr. D. P. Morgan, of Clarksburg, in consultation.

Dr. Morgan arrived about 11 o'clock, P.M. The patient had now had about three hours of quiet rest, suffering no pain except as the involuntary acts of swallowing came on. We at once repeated the efforts at extraction by means of the forceps and hook, and again produced vomiting and retching by our manipulations, but all, as before, to no purpose, and we now together decided that the operation of opening the œsophagus was our only recourse.

The operation of pushing the coin into the stomach was discussed, but our experience had demonstrated to our own minds the impossibility, from its being so firmly impacted, of moving it safely in any direction; and we decided not to incur the risk of putting it beyond the point where it could be readily reached by œsophagotomy. After consulting with the family physician, Dr. J. M. Tate, who concurred with us in our opinion, we were the next morning prepared to do the operation, if matters, in our opinion, still justified such action. We found that our patient had passed rather a comfortable night, sleeping most of the time; but, upon examination, we found the coin still in the same position. We made another effort at extraction, but only to fail again, from spasm of the tube above the foreign substance. I then proceeded to operate in the following manner. I first made an incision through the skin, beginning opposite the upper border of the thyroid cartilage, midway between it and the sterno-cleido-mastoid muscle, and extending downward three inches, or to a point at the anterior margin of the sterno-cleido-mastoid muscle, about two finger-breadths above the upper end of the sternum. By working carefully with the grooved director and knife, the carotid sheath was exposed, which was then drawn outward with a retractor, while the larynx and trachea, along with the omo-hyoid, sterno-hyoid, and sterno-thyroid muscles, and the thyroid gland were drawn inwards. From this point, the coin could be plainly felt, and acted as a guide while dividing the successive layers of fascia, connective tissue, etc., which finally brought us to the œsophagus. During this part of the operation, the utmost care was taken not to injure any of the many important vessels and nerves which lay so near our course, especially the inferior thyroid artery and recurrent laryngeal nerve. The tissues were raised upon the director, and examined carefully before being divided, and we had the satisfaction of reaching the tube without interfering with but a single minute artery; this lay directly across our course, when nearly to the œsophagus, and was divided, after having been secured with a ligature on either side of the wound. The tube having been reached, I made a limited incision upon the foreign substance, introduced a pair of polypus forceps, seized the coin, and then enlarged the incision sufficiently to admit of its extraction. We found the coin, an ordinary fifty-cent piece, with milled edges, lying transversely

[1] Read before the West Virginia State Medical Society, May 22, 1884.

in the œsophagus, its upper edge being about three-quarters of an inch below the lower edge of the cricoid cartilage, and its lower edge somewhat below the upper end of the sternum.

The wound was carefully closed with five very fine interrupted sutures of silk. The ends were cut off close, with the view that the sutures might ultimately readily drop into the interior of the passage.

The external wound was left open nearly an hour, until all oozing of blood had ceased, and the cut surfaces had become nicely glazed over with plasma (a point that my preceptor, the late lamented Dr. H. W. Brock, always insisted on as being of especial importance when union by first intention was desired). After this, the wound was closed in the usual manner, the two ligatures heretofore mentioned being drawn out through the wound, and left in that position to insure a discharge outward in case of any pus-formation.

The after-treatment of the wound was managed upon general principles. For the first few days, we nourished our patient exclusively by rectal injections of beef essence, with beef peptonoids, and almost exclusively so for two weeks. These would relieve hunger in a short time. By the third day, however, thirst became troublesome, and we allowed ice-water to be used, a teaspoonful every hour or so, and by the next day, we allowed, in place of this, a part of the time, iced milk; these were swallowed readily, and without the least pain at any time.

From the third to the fifth day there was a little fever, the temperature rising to 101°, and the pulse to about 100; but beyond this there was not a single unfavorable symptom. The wound healed almost entirely by first intention, there being only a little discharge around the ligatures, which were left to come away almost of themselves, and which they did about the fourteenth day. By the nineteenth day, the wound had entirely healed, and the patient was walking about the town.

MEDICAL PROGRESS.

MALFORMATIONS IN THE FEMALE SEXUAL ORGANS RESULTING FROM ARREST OF DEVELOPMENT.—DR. B. B. BROWNE, of Baltimore, in an interesting paper on this subject, read at the late meeting of the American Medical Association, summarized his conclusions as follows:

1. Nearly all the malformations of the female sexual organs previous to puberty result from arrest of development.

2. As the upper and lower portions of Müller's ducts develop independently of each other, we may find the ovaries developed without the uterus and *vice versâ*.

3. Perfect development of the external genital organs and the mammary glands does not preclude defective development of the vagina, uterus, or ovaries.

4. Entire absence of the uterus or ovaries can only be determined by laparotomy, or by post-mortem examination.

5. A patulous urethra with atresia of the vagina results from arrest of development, and does not indicate that the urethra has been dilated by sexual intercourse through this organ. The patulous condition of the urethra may be the *cause*, but is not the *result* of penetration.

In *congenital* atresia of the vagina, with arrest of development in the uterus, a patulous urethra is the rule; in *acquired* atresia of the vagina the urethra is never patulous, and sexual intercourse never takes place through the urethra.

CURE OF PARALYSIS DUE TO CEREBRAL HEMORRHAGE.—Authorities differ greatly as to the time after an apoplectic attack followed by paralysis, before commencing treatment by electricity. The general opinion is in favor of allowing some time to pass, so as to permit the absorption of the clot and the subsidence of the inflammatory reaction. PROF. DE RENZI (*Rivista Clinica e Terapeutica*, January, 1884), on the other hand, thinks that electricity may be employed, if proper precautions are taken, with the greatest success a short time after the attack, that is, in the first week. To the treatment by electricity he invariably adds other means to prevent the return of the hemorrhage and the development of inflammatory reaction. These consist in the internal use of bromide of potassium, the constant application of cold to the head, and the administration of some drastic purgative whenever there is constipation. The application of electricity exerts an immediate effect on the muscles, which, in the majority of cases, at once regain their contractile power under the influence of the will. S. P. was admitted suffering from cerebral hemorrhage; on the fourth day of the attack, there was complete paralysis of the left leg. Electricity was applied to the muscles of the thigh, and immediately afterwards the patient was able to bend the limb and to raise the knee for some distance from the level of the bed. On the next day, the patient was unable to extend the limb after bending it; electricity was again applied; he then flexed and extended the leg several times without difficulty. On the sixth day paralysis of the toes only remained, and this also yielded to electricity. The application of electricity ought to be practised directly upon the rapid and spontaneous disappearance of the paralytic phenomena, which is usually noticed in the first days after an attack of apoplexy, is arrested. The intensity of the current should be very little, and such that it can hardly be perceived by the observer, touching the rheophores with his fingers wetted in salt water. The interruption of the current must be considerable, the greatest that can be obtained with the automatic interrupting apparatus of the electrical machine. The electrical excitement must be limited to the muscles and intramuscular nerves, therefore the two rheophores must be applied successively for a few seconds to the fleshy parts of the various muscles. The duration of each application is from one to several minutes. The instantaneous action of electricity in paralysis from cerebral hemorrhage is easily explained, by admitting that these paralyses are often neurolytic or suspensive, and that they do not depend on destruction of nerve-elements. The electricity induces in the nerves a negative variation, which extends to the two extremities of the nerve-fibre; so that it overcomes the state of neurolysis determined at the central extremity of the same fibres by the extravasation of blood.—*London Medical Record*, March, 1884.

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SATURDAY, MAY 31, 1884.

PNEUMOCELE.

HERNIA of the lung is an infrequent lesion. Its spontaneous occurrence must be placed among the rarest accidents that befall the thoracic viscera. Desfosses, up to 1875, was able to collect only twenty cases, of which seven were spontaneous, the remainder being due to traumatism, such as wounds, fractures, etc. A portion of the lung projects into the neck, or passes towards the surface of the body through some part of the chest-wall, or through the diaphragm into the abdominal cavity. The recognition of the last form during life is impracticable. The pneumocele in other positions may be made out clinically as a soft, reducible, localized swelling, resonant on percussion, and rendered more prominent by coughing. Its usual site is in an intercostal space near the sternum. A case occurring recently in the service of Dr. Malherbe, in the Hôtel Dieu, at Nantes, and published by VIGNARD (*Gazette Medicale de Nantes*, April 9, 1884), is of interest as illustrating the clinical traits of hernia of the lung, and its occurrence in an extraordinary and hitherto unrecorded position.

A stonemason, fifty-two years of age, small in stature, and poorly nourished, entered the hospital February 23, 1884, seeking relief from a bronchitis contracted the previous November. Upon examination, the bronchitis was found to be complicated with a high degree of emphysema, chiefly affecting the right lung. Ten days after admission, he made a false step in descending a stairway, and, immediately following a violent effort to recover himself, he experienced an intense burning and tearing pain in the chest, just above the pit of the stomach. Two days afterwards, the pain still continuing, a slight swelling was observed upon the anterior wall of the chest, in the median line, and toward the extremity of the sternum. This swelling had the form of the segment of a sphere, was about as large as a silver dollar, and elevated "some millimetres" above the level of the neighboring surface. The skin was not discolored. The ordinary movements of respiration had no perceptible influence upon the volume of the tumor; but upon forced breathing, it protruded about half an inch, only to subside promptly when the effort ceased; while efforts of coughing caused a sudden and yet more decided protrusion. This tumor was soft, elastic, non-fluctuating, and yielded a sense of crepitation to the finger. Under moderate pressure it disappeared, giving place to a faint depression, but returned in the course of a few moments, especially if the patient coughed, when there was to be felt a distinct movement of impulsion. When the tension was reduced, there was felt through the integument in the median line and four-tenths of an inch above the point of the xiphoid cartilage, a round orifice, with bony margins, dull below, sharp-cut above, and about one inch and one-fifth in diameter. This seemed to be an exaggeration of the orifice occasionally found in the xiphoid appendix. Percussion over this tumor yielded pulmonary resonance, bounded on the right and below by the dulness of the liver, above by that of the heart, on the left by the clear tympany of the stomach; upwards and towards the right the resonance was continuous with that of the right lung. Auscultation furnished no satisfactory signs. The tumor was the seat of continuous dull pain, aggravated by pressure, by cough, and by effort.

The diagnosis of hernia of the lung was based upon the foregoing characters; of hernia of the *right* lung upon the following data: 1. Propagation of the pulmonary resonance from the tumor in a direction upwards and towards the right; 2. The pain, having its seat in the tumor, radiated towards the right lung; 3. Although the borders of neither lung extend, under normal conditions, to the xiphoid appendix, that of the left lung is much more distant from it than that of the right, which, being in this case emphysematous, had displaced the mediastinal pleura until it reached and pressed against the orifice existing in the xiphoid appendix. The fibrous structure guarding this orifice, yielding gradually to the strain of the lung-pressure, augmented by heavy labor, and more recently by repeated paroxysms of cough, had suddenly given way under an effort more violent than common, and had permitted the border of the lung to find its way through the orifice out under the skin.

Vignard calls attention to the coexistence in the patient of a voluminous, reducible, right inguinal

hernia, as indicating, perhaps, some want of the normal resistance of the fibrous tissues.

THE DANGER OF CANNED GOODS.

The bill introduced in the New York Legislature, requiring all goods sold in the State to have the date of packing stamped on the can, implies a danger of impairment in the purity of goods packed for an undue length of time, in regard to which the public should be properly cautioned and protected. The requirement appears to be reasonable, apart from its bearing upon the question of health. The proposition has excited considerable comment and opposition upon the assumption that its adoption will be injurious to a large mercantile interest. How this can be is not clearly apparent. It has been suggested that before legislating upon the question, it would be wiser to have the whole subject of the alleged dangers to health from the use of canned goods thoroughly and impartially investigated, so as to furnish results upon which to base intelligent action.

There is already a suspicion in the public mind, that canned goods are not free from danger, and reports in the newspapers of cases of sickness supposed to have been due to this cause have tended to confirm it. Some more tangible evidence, however, is required, before the passage of laws which might destroy the sale of cheap foods and injure a prosperous industry.

Tin has frequently been found in canned articles of food, as attested by the investigations of Menke, Hehner, and Blyth. Recently, Drs. Ungar and Bodländer of Germany, have examined a number of cans of vegetables and fruits, and in every instance found tin in the solid portion of the contents in the form of an insoluble stannous compound. The percentage of the impurity—calculated as metallic tin—was very small, in no case exceeding 0.04 per cent.

At a meeting of the Pharmaceutical Society of London, held March 5, 1884, Professor Attfield read a paper on the subject of tin in canned foods, in which the results of a large number of examinations, including sixteen varieties of food, were detailed. In only a few instances were traces of the metal found, and the proportions were so exceedingly small as to be undeserving of serious notice. He remarks that it is just possible that in the early days of canning a little stannous, plumbous, or other chloride might have been found in canned food as the result of the use of "spirits of salt" in soldering, but such a fault has rarely been detected of late years. A harmful quantity of a soluble compound of tin would render the flavor of the food so disagreeably metallic as to prevent its use after being once tasted. In his opinion, given after a long experience and an examination of all the evidence at hand, "the public have not the faintest cause for alarm respecting the occurrence of tin, lead, or any other metal in canned foods."

It is not intended to convey the idea that canned food is never injurious to health; but when harm has been done, it is in all probability due to the food, and not to the can. When food is allowed to remain long in an opened tin, there is no doubt that it may take up portions of tin, iron, or other metal, but such an accident is the result of gross carelessness, and not of a fault in the process of canning.

The other side of the question is presented by Dr. Johnson in a paper read before the New York Medico-Legal Society in April last. He cites several cases of corrosive poisoning supposed to have been due to muriate of zinc and muriate of tin, derived from the use of the "muriate of zinc amalgam" in soldering cans. This method is said to have been extensively used. The State of Maryland has a law prohibiting the use of this flux, because it is considered a dangerous practice. We are informed from another source that this soldering flux, consisting of a solution of muriate of zinc, is still quite commonly used in canning factories in the place of rosin flux, which is more troublesome, but harmless. Though every care is said to be taken in its application, it is undeniable that the substance is poisonous, and therefore a risk of injury attends its use.

The French Commissioner of Hygiene admits a possible cause of lead-poisoning from food which has come in contact with solder or with surfaces covered with an alloy containing lead; and he suggests that makers of cans be prohibited from soldering on the inside of such cans, or to employ in their manufacture any but the best quality of tin. What is known to the trade as "seconds," or doubtful or "reprocessed" goods, are in the market, but are not dealt in knowingly by any reliable firms. The appearance and taste of such goods should cause them at once to be rejected by sensible people. With such articles, the attempt at preservation has been a failure, and their unwholesomeness is due to the admission of air and resulting decomposition.

There is scarcely any doubt as to the wholesomeness of food preserved in tin when due care is observed in the use of only a pure article of tin, and in the preparation and sealing of the cans. It is to the interest of those engaged in the business of canning, to see that these important particulars are scrupulously carried out, and we believe that most of the products placed upon the market will stand the test of a searching examination. It is also apparent from what has been said, that canned goods are exposed for sale which it is unsafe to use on account of the objectionable methods of preparation and quality of the food itself. The public are not always able to

discriminate; hence the want of confidence in the purity of these foods as a class.

In view of the conflicting opinions which prevail, and the importance of the subject, it would be a benefit, as well to the honest producer as to the consumer, to have a commission of inquiry appointed to investigate thoroughly and impartially the question in all its relations, so that, if necessary, proper legislation could be secured in behalf of the public welfare. The National Board of Health would have been the proper authoritative body for conducting such an inquiry. In lieu thereof, the work might be safely entrusted to one of the more active State boards of health.

TIME OFTEN AN ESSENTIAL ELEMENT IN THE DIAGNOSIS OF PREGNANCY.

IT was remarked by one of the old medical authorities that the physician's reputation is never in greater peril than in the diagnosis of pregnancy. We may add that probably more avoidable errors are committed in this diagnosis than in any other department of medicine. One great source of error is in hasty judgment—giving an immediate opinion when a few weeks' delay might reverse it, or secure its unequivocal confirmation; this disposition to decide at once in cases of possible pregnancy is sure to bring a man to grief, and possibly to disgrace, sooner or later. Very often in the reports of cases that are being tried, we read at the close, "Judgment reserved." In medical practice the physician ought to write down after his record of some of his cases, especially of some of those in which the diagnosis of pregnancy is to be made, the same words. Time is the great revealer of secret things; the asserted pregnancy which, like the weaving of Penelope's web, never ends, as well as the denied pregnancy, which, a few months after the denial, is proclaimed by an infant's first cry, often bears testimony to professional errors that disappoint if they do not disgrace. How much better it would be, unless the evidence be beyond all cavil or doubt, to wait a few weeks, or even months, until the proofs become conclusive, than to commit such errors.

Pajot urges, in his *Clinique d'Accouchements*, the importance of such delay, and relates a case which he had recently seen. A lady, in her first labor, had such injury that a vesico-vaginal fistula resulted. Subsequently she had two other confinements, when her husband died. She remarried, but never had coition without a sponge being in the vagina. This was constantly worn, partly as a support to the uterus, and partly to receive the discharge which escaped from the bladder. Uterine enlargement, and then, as she believed, fœtal movements, led her to consult Pajot, who, failing to hear the fœtal heart, or to discover in the cervix the usual changes of pregnancy, declined to give an opinion. Her menstruation continued, in spite of the enlargement, as she thought, from pregnancy. By Pajot she was referred to a distinguished Paris surgeon and accoucheur, who decided that she had an ovarian tumor, and desired to puncture it. The patient, frightened at this decision, wished to consult "*le prince des kystes de l'ovaire*," and Pajot took her to him. He, after a careful examination, neglecting, however, auscultation, decided she had a large uterine fibroid; the mortality was very great—70 per cent.—but he would operate in three months if the family desired it. Three weeks after this examination she gave birth to a child of between seven and a half and eight months, and, of course, the tumor was gone. With Pajot we may well say that in such cases time is the best of all means of diagnosis.

PRIORITY IN THE REDUCTION OF CHRONIC UTERINE INVERSION.

IT is somewhat remarkable that the late Dr. J. P. White, in his paper upon chronic inversion of the uterus, presented to the International Medical Congress held at Philadelphia in 1876, made no reference to the successful reductions prior to his own, and to that of Dr. Tyler Smith. That of the latter was in September, 1856, though not published until April, 1858; the inversion was of twelve years' standing. Dr. White's first case was in March, 1858, the inversion had existed for six months, and the report of the operation was published in THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES for July, 1858.

But Canney, in January, and Barrier, of Lyons, in March, 1852, each reduced a chronic inversion, in one case six, in the other fifteen months after the occurrence of the accident. Denucé, in his recent *Clinical Treatise upon Uterine Inversion*, Paris, 1883, refers to these two cases, and gives in full an earlier case, also in the practice of a French physician. The operator in this case, occurring in 1847, was Vitry; the inversion had lasted sixteen months, and the success was obtained by using ether until complete anæsthesia was produced, and then the reduction was effected by taxis, counter-pressure being made at the hypogastrium. Denucé remarks that the discovery of reductions of chronic inversions was delayed because the previous discovery of etherization was necessary. But it should be remembered that one of the successful modes of reduction, that which is due to Tyler Smith, by continuous elastic pressure, does not require an anæsthetic. Nevertheless, Denucé's remark is true as to reduction by taxis, for in it the use of an anæsthetic pushed to such a degree that all contraction of the uterus and of the abdominal muscles is abolished, is necessary for success.

SOCIETY PROCEEDINGS.

THE AMERICAN MEDICAL ASSOCIATION.

Thirty-fifth Annual Meeting, held at Washington, May 6, 7, 8, and 9, 1884.

(Specially reported for THE MEDICAL NEWS.)

SECTION ON OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY.

WEDNESDAY, MAY 7TH—SECOND DAY.

DR. J. F. FULTON, of Minn., read a paper on

THE INFLUENCE OF CLIMATE ON THE TREATMENT OF CATARRH OF THE MIDDLE EAR.

Referring to the fact that non-suppurative disease of the middle ear forms one-half, at least, of the cases that come to the aurist, and enlarging upon the suffering often entailed by it on the patient, resulting sometimes in suicide or insanity, he stated that after all other means had been exhausted, the influence of climate should be brought to bear. In some instances, after all else had failed, a change of climate had effected a complete cure.

Heroic treatment by strong solutions of caustic potash and soda had been discarded, but modern otologists had retained the principle of *stimulating* in a milder way this form of ear disease, and the effect of a cold, stimulating climate upon such cases was very beneficial, and might be compared to the effect of the same climate upon the early stages of phthisis, before suppuration had taken place. An analysis of 50 cases sent to St. Paul, Minn., with the same number treated in Pennsylvania, gave for the more northern locality 18 cures, 20 improved, and 12 unimproved, against 4 cures, 9 improved, and 37 unimproved in those treated in Pennsylvania. The dryness of the atmosphere was a great factor in the beneficial effect. The absolute humidity is very low, and the relative humidity is ten degrees lower than the average in any eastern State.

He gave the history of a case of a severe type, in which deafness was so great that the watch could only be heard by contact, and in which severe nasal catarrh was present. Six months in Pennsylvania under treatment gave no improvement, or only temporary results. A transfer to St. Paul was followed by relief of all the distressing symptoms, and greatly improved hearing. The best results were in cases originating in foreign countries, while those proved most obstinate which originated in this country.

In the discussion on this paper, DRS. SEILER, WILLIAMS, and others believed these results to be in accordance with facts as noticed by them.

DR. WILLIAMS said that he would be glad to send all his patients afflicted with "dry catarrh," as it was popularly called, to any climate holding out hopes of a cure.

DR. L. TURNBULL, of Phila., defended the Pennsylvania atmosphere from the charge that all parts of the State were inimical to the cure of this form of ear trouble.

DR. D. N. RANKIN, of Penna., read a paper on

EPISTAXIS.

The nature and history of this obstinate affection were described, particularly the hereditary form, now considered a form of hæmophilia. A rheumatic diathesis generally accompanies this form, but its pathology is still uncertain. Examination of the blood of patients has given negative results. A case was mentioned in which eighteen pounds of blood had been lost in thirty-six hours. He then related the history of several cases which had come under his treatment. After checking hemorrhage by plugging or the galvano-cautery, he used ergotin, iron, and quinine internally for several months to combat the constitutional tendency.

DR. BROWN, of Ohio, mentioned a family of twelve members all afflicted with the hereditary form of epistaxis, some of whom came under his care. Watery extract of witch-hazel, in teaspoonful doses, had produced good results.

DR. W. S. LITTLE, of Pa., read a paper entitled

A TEST-CARD OF WORDS MADE UP OF LETTERS CONFUSING TO THE ASTIGMATIC EYE; REMARKS ON ASTIGMATISM.

He desired, he said, to bring to the notice of the profession a test that will exhibit manifest defects more markedly, and bring out more latency than do many tests; the recognition of optical defects, especially those produced by astigmatism. The letters in Snellen's type, and in other letter-types, will exhibit the defect by the way the person tested expresses the name of the spherical and right-angled letters, *O* is called *C* or *G*; *F* is called *P*; *B* is called *S*; or *vice versâ*.

In simple myopia or hypermetropia the distortion does not occur, but obliteration of the letter of a given size at a given distance. This fact has been recognized. He has devised a test based on the distortion and confusion of letters, and after a prolonged trial finds it especially useful for the general practitioner.

The letters most frequently distorted have been selected from Snellen's type, and formed into a word; underneath this word has been placed the letters of the same word as they appear to the astigmatic eye; they say the letters in the word and in the line underneath the word are alike. To give an approximate mathematical expression to the degree of the defect, the size of the letters are graded from D. = 18 to D. = 6. Four letters in the word and four letters in the confusion-line below. The word *FOOL* has been selected, underneath it the same sized letters graded, are the letters *PCCI*, which are taken for the letters in the word *FOOL*.

Tested at six metres, the last letter in the worded line underneath being D. = 6, *F* is called *P*, each *O* is called *C*, *L* is called *I*; the whole word distorted at six metres, 1 D. or more of astigmatism exists. If the last three letters are distorted in *FOOL*, and called same as last three letters in line underneath, 0.75 D. of astigmatism exists; the last two letters so affected, 0.50 D. of astigmatism exists; the last letter, 0.25 D. of astigmatism. In simple myopia or hypermetropia of 1 D., the letters in each line are lost or obliterated, but no distortion, or confusion, or likening of each letter in each line under one another occurs as in astigmatism.

To obtain the position of the good and bad meridian in astigmatism, the horizontal lines, one over *FOOL*, the other under *PCCI*, will enable this to be found. The size of the lines is D. = 9. They can be held horizontally, vertically, or obliquely to either side. Tested at six metres, if both are seen distinctly horizon-

tally, they are not vertically; or the reverse, according to the axis of the good or bad meridian. The same holds when held at any angle—astigmatism existing. In astigmatism higher than 1 D., the same type can be brought nearer, or the word *NULLIFIED*, in type from D. = 60 to D. = 4, can be used. In letters over D. = 6, defect higher than 1 D. will be exhibited.

While the test is useful for the diagnosis of optical defects, it answers the purpose as well for correction of these defects with glasses, and for proving work done by other valuable and necessary tests at the hands of the ophthalmic surgeon.

Dr. J. L. Thompson, of Indiana, protested against that portion of the gentleman's remarks which seemed to inculcate a disuse of mydriatics in the examination of the eye for all defects of vision. He was satisfied from the examination of those patients who had previously been under the treatment of other practitioners, that the most eminent men sometimes made "the most horrible mistakes," from neglecting to dilate the pupil.

Dr. Reynolds, of Louisville, referred to the importance of determining as nearly as possible the exact *meridian* of the astigmatism.

Dr. Samuel Theobald, of Baltimore, said that in one-half of the cases that came to him, he used no mydriatic, with just as good results, and desired to put himself on record as opposed to their indiscriminate use.

Dr. Shakespeare, of Philadelphia, said that he did not believe it possible to determine the nature and degree of astigmatism without mydriatics.

Dr. S. D. Risley, of Pennsylvania, believed in dilating the pupil "in the vast majority of cases."

Dr. Connor, of Detroit, and others, gave their views, the preponderance of sentiment being apparently decidedly in favor of the use of mydriatics in all cases except when age makes it unnecessary, or glaucoma is threatened.

Dr. Little said that he was a full advocate of their use except in such cases.

Dr. Laurence Turnbull, of Pennsylvania, then read a paper on the

DISEASES OF THE EAR IN LOCOMOTIVE AND OTHER ENGINEERS, FIREMEN, AND CONDUCTORS, WHICH MAY ENDANGER THE LIVES OF THE TRAVELLING PUBLIC.

The prevalence of a greater or less amount of deafness among railroad employés was dwelt upon, and the result of experiments made upon the hearing of men so engaged was given, and the author concluded by suggesting that legislation should be called for to insure a *maximum*, not an *average*, degree of hearing on the part of those who took the lives of the public into their hands.

Dr. C. M. Hobby, of Iowa, gave a

PRELIMINARY REPORT UPON THE CAUSES OF BLINDNESS.

These were conclusions drawn from the United States Census and one hundred and fifty-two cases of blindness, all of the latter being pupils of a college for the blind. The separate lesions were classified according to age, sex, and, so far as practicable, to causation. Among causes, ophthalmia neonatorum constituted but twenty-six of the total, thus contradicting the assertion on the previous day by a gentleman, that it caused more than half of all cases of blindness. His experience showed that twenty-five per cent. of all was congenital blindness, and seventeen per cent. more before one year of age or forty-two per cent. under one year, but the United States Census gave different results. He gave as his opinion from his own observations that "it is safe to infer from the cases noted that marriages of consanguinity had no effect on the vision of the children."

Dr. C. S. Bull, of New York, then read a paper on

THE METHOD OF HASTENING THE GROWTH OR RIPENING OF CATARACT.

This was Fœrster's operation of broad iridectomy, followed by a rubbing or massage of the cornea. Fœrster had seen no iritis following on the operation in one hundred and fifty cases. The writer *has* seen this ensue, but it was a mild form, and amenable to treatment.

Dr. Joseph A. White, of Richmond, said that he had operated in this way in only three cases; the effect of the massage was to produce an opacity of the cornea which remained for six months after the operation.

THURSDAY, MAY 8TH—THIRD DAY.

Dr. E. F. Ingals, of Chicago, read a paper on

NASO-PHARYNGEAL FIBROMATA.

He exhibited a snare such as he was in the habit of using for their removal. Four cases were described in which tumors were removed by this instrument, or by its use conjoined with the galvano-cautery. He believed that when the stump of a tumor was thoroughly cauterized, its return was much less likely to occur.

Dr. F. H. Bosworth, of New York, said that he had removed growths where the employment of the galvano-cautery had been productive of infinite mischief, and of all forms of cautery he considered that the most injurious. He would like to see the profession get rid of the idea of "roots" to these growths. There were, in fact, *no* roots.

Dr. Turnbull agreed with Dr. Bosworth as to the injurious effects of the galvano-cautery.

Dr. J. N. Mackenzie, of Baltimore, read a paper on

THE EFFECT OF CHROMIC POISONING ON THE NOSE AND ADJACENT CAVITIES.

He described the frequent occurrence of ulceration, sloughing, and final perforation of the septum nasi in workmen engaged in the chrome works in Baltimore, the whole attack frequently running its course in forty-eight hours or less. These cases were *not* due to syphilis or other constitutional disease, but were directly traceable to the effect of inhalation of bichromate of potash, the fine particles of which permeated the air of the establishment and set up the inflammation described.

Drs. Turnbull and Bosworth took part in the discussion of this paper—the latter holding that, except in a few rare cases, molecular death of the part, and perforation of the septum following on ulceration, are always due to constitutional taint.

Dr. F. H. Bosworth, of New York, read a paper on a case of

ROUND-CELLED SARCOMA OF THE PHARYNX AND SOFT PALATE, WITH EXHIBITION OF THE PATIENT,

who, by his ruddy complexion and general appearance of health, would not have been suspected of ever having

undergone such a series of operations as were described. The origin, growth, repeated removal, and final extirpation of the growth were described, together with the profound weakness and cachexia which the patient exhibited towards the last, his life having been despaired of at one time. The fragments of the tumor were also exhibited in a bottle of alcohol. Since the final operation, in November, 1882, the patient had enjoyed excellent health. He stated that in this case he had first used the galvano-cautery as being an orthodox instrument, but discontinued it as soon as he saw the injurious effect it produced. He now believed it to be an ingenious instrument, possessed of much *moral* weight in its effect on the patient, but more frequently doing more harm than good, and had not used it for eighteen months. The members were then invited to examine the result of the operations as seen in the patient, who was present.

DRS. ROE and MACKENZIE defended the galvano-cautery, as sometimes filling the requirements better than other instruments.

DR. BOSWORTH objected to the uncertainty of its action, owing to our inability to control the degree of heat. The pain produced by the instrument was also an objection. A bit of chromic acid would give as much caustic effect, with but a trifling amount of pain as compared with the galvano-cautery.

DR. UHLER, of Maryland, then gave an exhibition of

INSTRUMENTS AND MODELS OF INSTRUMENTS FOR THE REMOVAL OF TUMORS.

He showed several models of corkscrew-like instruments for extracting tumors, and said that a veritable corkscrew was frequently useful as an adjunct. He also exhibited a small pasteboard model of an operating-table on which the patient lay on an inclined plane, the surgeon being under the table.

DR. E. C. MORGAN read a paper on

APHONIA DUE TO CHRONIC ALCOHOLISM,

in which he argued that alcohol should be classed with lead, opium, and other poisons as an occasional cause of muscular paralysis of the muscles concerned in speech.

DR. ROE then read a short paper on

SOME CASES OF TRACHEOTOMY,

which contained some statistics, and the report of a successful tracheotomy on a child seven months old, which was suffocating from a foreign body in the trachea.

The Section then adjourned *sine die*.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Thirty-fifth Annual Session, held at Philadelphia, May 14, 15, and 16, 1884.

(Specially reported for THE MEDICAL NEWS.)

FRIDAY, MAY 16TH—THIRD DAY.

DR. JOHN L. ATLEE, OF LANCASTER.

DR. R. J. LEVIS, of Philadelphia, offered the following:

Resolved, That the members of the Pennsylvania State Medical Society, hearing of the illness of their distinguished and venerable colleague, Dr. John L. Atlee, of Lancaster, they desire to express to him their regret at missing him at their meeting, and their warm wishes for his recovery, and for a long continuance of his honorable, energetic, and useful life. Adopted.

THE ANATOMY ACT.

DR. JOSEPH LEIDY, of Philadelphia, presented the following:

Resolved, That the Medical Society of the State of Pennsylvania, recognizing the importance of anatomy, and duly appreciating the recent Acts of Assembly making provision for efficient distribution, recommends the members of the medical profession throughout this Commonwealth to encourage and assist the Anatomical Board in carrying out the provisions of said Acts.

DR. J. EWING MEARS seconded the resolution, and remarked that the Acts were safeguards against grave-robbery, and if strictly enforced there would be enough dissecting material for all educational purposes. The great need was an enforcement of the law outside of Philadelphia County. If all counties would send the bodies as the law required, there would be no trouble in regard to the supply. The resolution was unanimously passed, and the Secretary was instructed to send a copy to each county Society.

Dr. William S. Little then delivered the *Address in Ophthalmology*, taking for his subject *The Value of Pupillary Symptoms in General Disease—an Analysis of One Thousand Cases*.

DR. EDWARD JACKSON, of Chester County, then read a paper entitled

ALARMING AND DANGEROUS DOSES OF THE MYDRIATICS,

based upon a study of two hundred and fifty reported cases of mydriatic poisoning, in which he attempted to point out the dose at which liability to a fatal result began. The mydriatics being almost always used in very small doses, say one-sixtieth of a grain of atropia, or an equivalent of other mydriatic preparations, practitioners are liable to come to regard such a dose as near the maximum that it is commonly safe to give; and such an idea is apparently supported by the fact that the symptoms of mydriatic intoxication are very liable to appear after the administration of any larger dose. A study of the literature of the subject, shows that such an idea exists without a good foundation. Among all the cases, the reports of which had been examined, but seventeen had terminated fatally.

The conclusions reached were: For adults, the minimum fatal dose of atropia is certainly not less than the minimum fatal dose of morphia. For children two years old, the minimum fatal dose of atropia is not less than for adults. There is every probability that the same is true of daturia or hyoscyamia.

It did not follow from these conclusions that the common dose of atropia or daturia should be the same as the common dose of morphia, but it was urged that in those cases in which the decided influence of a mydriatic was clearly indicated, for example, cases of iritis, these drugs should be used more freely than they often are. In the meanwhile, the proper measures might be taken to avoid the unpleasant symptoms of mydriatic intoxication; and even if this should to some extent

occur, it was not to be regarded as more indicative of danger than the intoxication produced by alcohol or ether.

Dr. Albert G. Heyl, of Philadelphia, then read a paper on a form of

EPITHELIAL MYCOSIS.

This disease has been known under various names, *e.g.*, corneal gangrene, kerato-malacia, etc. Graefe described it under the title of corneal ulcer of infantile encephalitis; his idea being that the corneal affection was of a trophic nature, the primary cause being an encephalitis. Jastrawitz has made this hypothesis untenable by showing that these supposed encephalitic products are simply the remnants of fœtal life. Leben within a few months has given a full description of a parasite found *intra nitam* in the conjunctival débris and *post-mortem* in the epithelium of the renal pelvis and in the small intestine. This parasite attacks the epithelial cell, inducing fatty degeneration of its structure. The dead cells accumulate in lamina, giving rise to a characteristic, dry, parchment-like appearance the so-called conjunctival xerosis. The disease is usually ushered in by hemeralopia. This symptom, which is associated with the conjunctival xerosis, may last a month or two, when corneal ulceration commences. About this time general symptoms appear. There are rise in body temperature, frequency of pulse, a dry, harsh condition of skin, and the hair on the head becomes dry, lustreless. Along with this a peculiar state of apathy is developed. Persistent purging and vomiting occur, and finally broncho-pneumonia, to which the patient succumbs.

All cases do not run precisely this course. Some do not proceed beyond the stage of hemeralopia; in others the corneal ulceration appears after the inception of the general symptoms. In some the apathetic state is the most striking symptom. In some constipation exists, instead of the purging. The existence of a parasite in the conjunctiva in this disease was known before Leben's researches. But Leben has not only given a clear account of it, but has also shown that it attacks the epithelial cell, and that it is found in other localities beside that of the conjunctiva. Probably the symptoms of the disease are traceable to this epithelial mycosis. Reasons were adduced for considering the epithelial cells as the receptive organ of centripetal nerves. Destroy these receptive organs in the conjunctiva, and certain impressions of light will fail of being conveyed to the proper centre. A distinction was drawn between those impressions which, coming from the outer world, may issue into voluntary action, and those which issue into involuntary action. Thus the sensation of light and that impression of light which is followed by the reflex closure of the lids are two different things. It is the latter which is absent in this disease by reason of the destruction of the terminal epithelial cells by which it is accomplished. The same rationale may be applied to the skin, which is a vital organ, containing a principal part of the thermic apparatus. The epithelial cells may be looked upon as the receptive organs through which the sweat glands are set in action. Destroy these and the function will be abrogated. Hence the apathetic state and possibly the broncho-pneumonia are developed. The purging and vomiting seem to be due to the direct presence of the parasite. In the treatment the careful administration of food is important, and as the application of moist heat to the eye has been found very serviceable, possibly it would also be if applied to the surface of the skin.

Dr. Carl Seiler, of Philadelphia, then described

A NEW ELECTRIC LARYNGOSCOPE,

which consists of the ordinary head-reflector mounted on a head-band by means of a ball-and-socket joint. From the lower rim of the mirror extends a slotted arm about four inches in length, upon the end of which is mounted a small incandescent lamp. Between the lamp and the reflector is a simple biconvex lens for the purpose of concentrating the light of the lamp upon the head-mirror, thus shortening the focus. To prevent the light from falling directly upon the patient's face, the anterior portion of the lamp is surrounded by a shield of silvered mica, which acts as a reflector. The wires from the battery run from the lamp along the bar and are fastened to the head-band, so that they hang from the back of the head of the operator. Any battery which has sufficient electromotive force to overcome the resistance of the carbon filament of the lamp may be used. The advantages of this instrument in illuminating the laryngeal and other cavities of the body are, that the light being once adjusted always is reflected in the direction of the axes of the eyes; that it is light, gives off very little heat and a whiter light than gas or a coal-oil lamp. And, finally, it can be used as an ordinary head-mirror without the electric lamp should the source of electricity give out, an accident which not infrequently happens, especially when the operator is not perfectly familiar with the tricks and vagaries of batteries. The paper was illustrated by the exhibition of the instrument, which gave forth a very satisfactory light.

Dr. Charles S. Turnbull, of Philadelphia, in a paper entitled

DOES A CHRONIC DISCHARGE FROM THE EAR MAKE LIFE INSURANCE HAZARDOUS,

called attention to the importance of chronic ear disease as a source of danger to life. Deafness of a dangerous or hazardous degree cannot be concealed, and is only an element of risk in so far as accident is concerned, while a chronic purulent inflammation of the middle ear, with perhaps some polypoid or necrotic complications, can be, and often is unwittingly concealed or overlooked, while it threatens life within a year. One remaining sound ear may do all the work, and the examiners may never suspect the defect.

Dr. Peter D. Keyser then presented *Some Ophthalmological Observations during Ten Years' Service in Wills Eye Hospital.*

Dr. E. T. Bruen, of Philadelphia, then read a paper jointly by himself and Dr. J. William White on

THE OPERATIVE TREATMENT OF PURULENT PLEURAL EFFUSIONS,

based on thirteen cases of empyema treated since 1877.

In serous effusion, whether undisturbed or treated by paracentesis, the predisposing causes of empyema were considered to be lowered vitality, scrofulous constitution and intercurrent disease. The termination of empyema, and the effects of pleural effusion upon the

lungs, were next dealt with. In regard to the diagnosis, the crucial test is by puncture.

Indications for treatment were then considered. Allusion was made to the healing process through the medium of adhesions of the inflamed pleural surfaces. Every movement of the chest walls draws the surface of the lung with it. When the fluid is evacuated or absorbed the character of the respiratory movements is improved, and they diminish in frequency as well as shallowness. The lung, being adherent, is dragged by the ribs in all their increasing movements. The lung expands, the adhesions to the chest wall increase; each fresh expansion results in further adhesions to the costal surface, which then acquires more power over the lung to promote its return to the normal state. The air in the pleural cavity does not interfere with healing. The point of puncture is the seventh intercostal space, and in a line with the posterior border of the axilla on the right, and on the left side the eighth space on the same line. The seventh rib is the last attached to the sternum, and can be easily traced.

The method of introducing a drainage-tube and dressings was noticed, as also the plan adopted in the resection of the ribs. A case in which the writers had performed this operation was reported, and the portion of the ribs shown.

The following conclusions were formulated:

1. The formation of purulent effusions is dependent on lowered vitality, scrofulous diathesis, and intercurrent disease.

2. The diagnosis can only be made certainly by puncture and inspection of the fluid. This method of examination need not be delayed for fear of favoring the purulent transformation of a serous fluid if proper aseptic precautions are observed.

3. In young children one or two aspirations will often suffice for a cure. If these fail, incision of the chest without the introduction of a drainage-tube is often all that is requisite.

4. In older children and in adults it is proper to aspirate once, but recovery not resulting promptly, a large drainage-tube should be inserted at the most dependent point.

5. If, after this, drainage is still imperfect, as shown by the fetid character of the discharge, a second opening should be made, and a tube carried directly across the base of the cavity.

6. If after a suitable delay, from two to four months, there is no disposition to permanent closure of the suppurating cavity, but if the lung has expanded sufficiently to indicate that it is capable of further descent it would then be proper to facilitate its expansion, and the obliteration of the cavity by removing certain portions of the ribs of the affected side.

7. If thorough drainage is accomplished, the use of disinfectants by intrathoracic injections is rendered unnecessary unless a stimulant to the granulating surface is required.

8. In cases in which the lung is at the bottom of the chest and bound fast to the diaphragm, in which it has been so atrophied prior to aspiration that there is no possibility of re-inflation, or in which it is occupied by a tuberculous or an inflammatory infiltration, this operation is contraindicated.

THE ADDRESS IN SURGERY

was then delivered by DR. JOHN B. ROBERTS, who took for his subject *Surgical Delusions*.

Many surgical theories and procedures have become traditional, and are accepted as true and correct, merely because reverence for antiquity or careless acceptance has not questioned their right to be classed as surgical facts. The present age is an incredulous one, and demands accurate investigation of all such claims. The field of investigation is large, for progress has been retarded by the influence of theorizing writers with monochromatic vision, the example of non-seeing and non-looking devotees of the fetiches of surgical superstition, and the convincing effect of a repetition of false statements. The author selected a few topics which have greatly interested him, and concerning which he probably differed quite widely from many.

Adherence to chloroform in the face of well-known facts as to its danger is criminal when circumstances permit ether to be obtained. The assertion that it is often impossible to produce anæsthesia with ether is the result of inefficient methods of administration. Ether, if given as chloroform is and should be given, is a useless anæsthetic; but, given properly, it is efficient.

Value of Styptics.—The belief in the necessity of styptics is a delusion less dangerous, but is given more extended credence. Such agents are seldom, probably never, needed in general surgery to arrest hemorrhage. When ligatures, torsion, or acupressure is not demanded (and such is seldom the case unless the artery is as large as the facial), moderate direct pressure applied in dressing the wound is the only hemostatic required. Styptics often do harm; and, as they are not needed, they should be discarded.

Danger of Trephining the Skull.—The dislike to make exploratory incisions in closed fractures of the skull evinced by some surgeons, and the objection of others to trephining and thus opening the diplöic structure in open fractures, are delusions of a most disastrous tendency. To wait until symptoms of cerebral compression or inflammation have supervened is to lose the most favorable opportunity for mechanical relief. Such a Fabian policy is often followed by death. The treatment of open and of closed fractures of the skull should not be looked upon as very different, since, with the present improved methods of dressing wounds, the successful issue depends almost entirely upon the cerebral rather than the cranial phase of the injury. If such fractures as are usually seen in the skull were not in proximity to the brain, the surgeon would consider them almost trivial. The feature of closed fractures that renders them so troublesome is the obscurity that accompanies them. The author has for a number of years strongly advocated making closed fractures open ones by means of an exploratory incision whenever there is a suspicion of the existence of depression or splintering. In open fractures, operations to elevate depressed portions, and to get rid of splinters of the inner table thrust into the membranes, should be undertaken. It is better to err on the side of action than that of inaction. Careful manipulation and proper dressings at an early stage are sources of less risk than is incurred by the surgeon who leaves unseen and unsuspected fragments thrust into the membranes or brain.

Operative Delay in Strangulated Hernia.—A similar delusion of fatal issue is that leading to postponement of operative interference in strangulated hernia. Repeated attempts at forcible taxis and medical powwowing with temporizing measures, have ended more lives than the use of the knife. Herniotomy, done within twelve hours, is almost always followed by recovery. Death is to be expected, however, if strangulation has existed for two or three days; and the gut has been bruised by violent manipulation in the endeavor to relieve the constriction by taxis. Moderate taxis under ether, a half day's treatment with cold applications and the internal use of morphia, and a second moderate attempt at taxis, followed, if unsuccessful, by immediate operation, is the sequence to be followed in strangulated hernia. When symptoms of strangulated hernia exist, the slightest fulness and tenderness in one groin over either of the rings, is a sufficient localizing indication to warrant operation.

Operative Delay in Acute Phlegmonous Inflammation.—No insane delusion, no Spanish Inquisitor, ever caused so many hours of excruciating physical torture as the hallucination that acute abscesses and furuncles must not be incised until pointing has occurred. All the world knows that evacuation of imprisoned pus in phlegmonous inflammations means instant relief of the agonizing pain; yet how few of the profession early and freely incise such inflamed tissues unless they first see the yellow pus under the thinned skin or feel the fluctuation of the fluid in the abscess cavity. The pain is caused by the effort of the pus and the sloughing tissue to escape. Is it not, then, more rational to make a free incision to-day than to wait till next week? Time and pain are both saved by early incision. If the cut is made before the pus is formed, so much the better. Probably no form of abscess needs early and free incision more imperatively than that under the palmar fascia. Destructive burrowing of pus is prevented by this radical procedure; which also saves the patient many days of poultices and purgatory.

Operative Delay in Malignant Tumors.—Much bad surgery results from a delusive postponement of operative interference in malignant diseases. Instant removal is to be practised in such cases, provided the patient is deemed fit to stand the surgical shock.

Necessary Fatality of Traumatic Tetanus.—That traumatic tetanus is, of necessity, fatal, is a commonly held opinion. Proper treatment is sometimes neglected because of this belief in its hopelessness. That the prognosis is extremely unfavorable was admitted, but that cases of a severe type recover is undoubted. Chloral hydrate in full doses has given the best results; but he merely wished to impress the fact that a fair number of cases of traumatic tetanus recover.

Fatality of Pericardial and Cardiac Wounds.—The prevalent notion of the excessive danger of these wounds is delusional; at least in as far as it teaches that these structures will not brook surgical interference. The pericardial sac should be dealt with exactly as the pleural sac by aspiration, incision, irrigation, and drainage, according to the lesion. That simple puncture or aspiration of the heart itself is not accompanied by the expected risk to life has been pretty well shown, though I am not prepared to recommend its general adoption for trivial cardiac conditions.

Symmetry of Normal Limbs.—Another delusion still existing in many minds is that the lower extremities are usually of the same length. Clinical and anatomical investigations show that asymmetry in the length of normal limbs is of common occurrence? Therefore measurements of the legs in cases of fracture are of little value, since it is impossible to know whether a long or a short leg is the seat of injury.

There are many other prevalent surgical delusions such as: That bony union of transverse fractures of the patella and of intracapsular fractures of the femoral neck cannot take place; that chronic purulent discharges from the ear do not need active treatment; that hypermetropia and hypermetropic astigmatism can be properly estimated and corrected without paralyzing the accommodation; that it is improper to perforate the nasal septum in cases of great deviation; that crooked noses are not amenable to treatment; that corneal operations and cataract extractions should be treated by cotton padding and bandages to the eyes; that fractures should be treated with carved or manufactured splints.

While an earnest advocate of conservative and of reparative surgery, Dr. Roberts believes that when operative surgery is demanded it should be aggressive. Delay, indecision, and inefficiency, impair the value of much surgical work and are often the legitimate result of a superstitious faith in delusive surgical dogmas.

DR. C. B. NANCREDE, of Philadelphia, then read a paper on

BICHLORIDE OF MERCURY AS A SURGICAL DRESSING.

He entered into some general remarks on the value of antiseptics in surgery and quoted statistics to support his statement. He regarded the corrosive chloride as superior to carbolic acid. The constitutional effect of mercury was sometimes observed, and sometimes it reddened the skin. It was not advisable to use the bichloride for instruments, as it rusted them. The dressing, when the bichloride was used, might, if thought advisable, be left on for as long as eight days without once being removed.

The mode of using the bichloride is as follows: The parts are thoroughly cleansed with soap and water, and are then bathed with turpentine and alcohol, 1 to 7. Sponges are put into a solution of bichloride of 1 to 2000; the instruments into a 1 to 40 solution of carbolic acid. The operation completed, vessels are ligated, a drainage-tube is inserted, and the wound washed with the solution of the bichloride, 1 to 2000. The opposing surfaces are brought together, and a dressing which has been soaked in the solution of the bichloride is applied and kept in place by gauze bandages which have also been saturated with the solution. Outside of this dressing other antiseptic pads are placed when necessary. At times the outer layers become discolored with discharges which emit a gluey odor, but on removing these the inner layers are found to be perfectly sweet. The bichloride solution 1 to 4000 or 1 to 2000 is as strong as there is ever any need for using.

THE JUDICIAL COUNCIL

reported that in the case of appeal of Dr. Cotton from the decision of the Censors of the Tenth District, both parties were heard and the papers submitted considered. It was decided that the notice of the special meeting to

convene at Townsville, November 6, 1880, was not adequate, in that it failed to state by what authority or for what purpose it was called. It was decided that the published *Transactions* of the State Society must be accepted as authentic in all its appointments. The following motion was adopted: *Resolved*, That the case be recommitted to the Censors of the Tenth District, with instructions that they return it to the Crawford County Medical Society for their early action.

DR. TURNBULL, of Philadelphia, presented a series of resolutions endorsing the action of the Alumni Association of the Jefferson Medical College in regard to the erection in Fairmount Park of a

STATUE OF PROF. S. D. GROSS,

and providing for a committee of five to be appointed to act in connection with said Alumni Association. Carried.

THE COMMITTEE ON PUBLICATION

presented a report recommending the passage of the following resolutions:

Resolved, That all papers read or appointed to be read before this Society, become thereby the exclusive property of the Society, and the author has no right to publish or cause to be published the paper or any part of the same without the consent of the Society, and that the Committee on Publication shall not be at liberty to publish any paper that has been published in violation of the above requirements.

Resolved, That the Medical Society of the State of Pennsylvania looks with great disfavor upon the making use of its meeting as an advertising medium, and holds such practice as contemptible, and a flagrant violation of the spirit of the Code of Medical Ethics.

The report, after some discussion, was laid on the table for further consideration.

The Chair announced the appointment of the

COMMITTEE ON LICENSE TO PRACTISE,

as follows; Drs. E. Jackson, of Chester; Traill Green, of Northampton; William Varian, of Crawford; J. M. Deaver, of Philadelphia; H. Leffmann, of Philadelphia; ——— Gates, of Luzerne, and F. Woodbury, of Philadelphia.

AFTERNOON SESSION.

DR. DE FOREST WILLARD, of Philadelphia, read a paper on

THE NON-NECESSITY OF TARSOTOMY IN TALIPES OF CHILDREN.

He reported the case of a girl, aged eight, who had double congenital varo-equinus of extreme degree, and who was tenotomized in infancy but totally neglected, and walked barefooted until eight. When first seen her toes looked backwards, soles outwards; rotation of tibiæ thirty degrees on long axis upon femur, and heels presenting outwards; abrupt angle at medio-tarsal articulation. She walked upon large bursal cushions and callosities on the outer dorsal aspect of feet, as seen in Fig. 1.

The tissues were dense and contracted, and pressure rectified the deformity but slightly. Powerful manual pressure, *redressement forcé*, was employed after tenotomy of both tibials and the long flexor, and of all tissues down to the bones upon the inside of the foot, and then section of tendo Achillis. After much stretching the feet were brought straight, and secured by gypsum splints. A powerful assistant, by accident, ruptured the internal lateral or deltoid ligament, and the superimposed tissues

FIG. 1.

Front view, from photograph.

giving way on the third day, the ankle-joint was opened, but drainage and carbolized oil-dressings closed the wound in six weeks. Her condition two years later is as seen in Fig. 2. She walks upon the soles; the right foot is

FIG. 2.

almost straight, but more rigid than the left, owing to the lacerations reported above; deviation in mediotarsal joint in left foot only slight, but the knee rotation still remains, and although spiral-spring eversion from pelvis as a base has been thoroughly tried, yet but little has been accomplished and no operative procedure promises success. This tibial twist serves constantly to throw the foot inward in walking, but can be counteracted by the patient whenever her attention is fixed.

It may have been congenital in its origin, or have been produced by the effort to prevent contact of toes during the years of reel-foot walking. She now walks

without a cane, and can dispense with apparatus on right foot. The left is retained in position by the author's shoe, Fig. 3, which acts by elastic tension ex-

FIG. 3.

erted by webbing attached at *c*, upward and outward upon *b*, through the medium of catgut cord playing through the eyelet *a*, a flexible joint in the sole being secured by soft leather in the shank.

Davy with his twenty-two operations reported up to June, 1882, is the only single operator, who has had a sufficient personal experience to speak with authority upon tarsotomy, but his one death from septicæmia gives a mortality of four and a half per cent., which is a very unfavorable showing as compared with the safety of tenotomy in the thousands of cases in which it has been performed. In 58 tarsotomies in 50 patients, 3 have died, showing that it is an operation that should still be looked upon as a *dernier ressort*, although Davy, Rupprecht, and König would not give it such a limited sphere, the former having performed one-half of his operations upon children under eleven. One certainly cannot believe that in an infant of sixteen months the bones could have become wedge-shaped, and if not so, the force necessary to restore the foot after tenotomy would not have been severe. Guérin says that the case of club-foot, however complicated, does not exist which is not curable without tarsotomy. Looking at the operation from the standpoint of subsequent walking powers, moreover, we find that a resected tarsus must necessarily be stiff from ankylosis; that caries or synovitis may result; that apparatus is frequently a necessity for locomotion; and that subsequent operations have been required in a number of cases.

The author then gave a *résumé* of 80 cases of tarsotomy upon 68 patients, 58 of which were wedge-shaped sections; 13 were resections of the astragalus, and 9 were excisions of the cuboid. His conclusions were:

1. In children under ten, even in extreme cases, subcutaneous division of all the contracted tissues, with powerful manual force applied even to a degree which would seem severe to one who has not tested it, will restore the feet to a proper position. Even laceration of plantar ligaments, or fracture if necessary, would still be subcutaneous and less dangerous than the opening of cancellous tissue.

2. Fixation by gypsum immediately after restoration, needs to be continued but a short time, after which stretching and the use of an apparatus that encourages muscular action, will give a more movable and a better walking foot than will be gained by tarsotomy.

3. Cases are not necessarily incurable because tenotomy has already failed. Since strict hospital supervision may be able to attain a good result, a careless parent can easily defeat the best efforts of the surgeon.

4. Tarsotomy, by reason of its risk and the rigid feet which it produces, should be limited to cases in which moderate measures have failed, and to adults with deformed tarsal bones. In these cases the operation becomes one of great value. It should be performed absolutely antiseptically, the wedge-shaped section with the saw being much more certain in its results than excision of the cuboid or of the astralagus.

DR. A. SYDNEY ROBERTS, of Philadelphia, then read a paper on

CHRONIC ARTICULAR OSTEITIS OF THE KNEE-JOINT.

He used the term to describe the condition known as tumor albus. His reason for so doing was by proper classification to refer directly to the inflammation of the cancellous structure of bone, thus avoiding confusion from the more general terms of arthritis or knee-joint disease.

From an analysis of many hundred cases he felt safe in asserting that only two structures are responsible: 1. The cancellous structure of the epiphyses. 2. The synovial membrane. These two are combined as a rule; one may develop from the other. The term arthritis is not justifiable till the cartilage and ligaments are invaded.

The author then described at length the pathology of the subject. Rigidity was due to inflammation, to the irritation of the nerves distributed through the epiphyses. The treatment of these conditions is among the most difficult problems that may fall to the lot of a general surgeon. To meet the universally recognized principles of treatment, *i. e.*, fixation of the joint in extension, I have designed a splint that I now feel justified, from its successes, in presenting to the profession.. It consists of two light steel, padded troughs, that are firmly secured to the limb by encircling bands of surgical webbing, affording absolute fixation to the joint when the extending rods are locked after adjustment. Three ratchet extension bars, arranged in the form of a triangle, are placed posteriorly corresponding to the long axis of the limb, placing within the control of the surgeon a power that will overcome the flexion and the tendency to the production of deformity, and at the same time produce extension. It will be noticed that the extension rod acts directly on the head of the tibia, and parallel with the line of contraction of the flexor group of muscles, obviously avoiding thereby the error in the mechanical arrangement of the popular Stromeyer's splint, or in all where the power is applied low down on the tibia to overcome flexion. In the splint under consideration, the long extension rod is used only as a compensating bar, adjusting the angle of the splint to the angle of the flexion of the limb. The power for restoring the head of the tibia and overcoming the spasmodic contraction of the flexor muscles, is applied directly in the axis of their contraction. Through the extension bar the head of the bone describes in its restoration the arc of a circle. The compensating bar in

correcting the angle of flexion, carries the limb through an arc whose centre is in the end of the femur. Mechanically, this arrangement of force corrects the deformity and relieves, by extension, the reflex spasm of the flexor muscles without crowding together the diseased joint surfaces or aiding in subluxating the head of the tibia, as would be the case should the limb proper be used as the long arm of our lever, with the insertion of the hamstring tendons instead of the normal centre of motion of the joint as the centre of motion of the splint.

Supplementing the direct extension upon the contracted muscles, another bar has been added to aid in steadying the joint and relieving interarticular pressure. Its action upon the limb is produced through adhesive plaster applied above and below the joint, to which surgical webbing has been attached. This is firmly secured to a counter-extending band and to the extension rod, affording a means of direct extension always corresponding to the angle of flexions. The extension bars are controlled by a key and ratchet movement, held in place after adjustment by a small ring and pin. I have found that this method of securing fixation with extension by a portable appliance, enables the patient to enjoy, by means of crutches, all the hygienic advantages of open air and exercise, facilitating thereby a better result than would be otherwise obtained.

DR. W. S. JANNEY, of Philadelphia, then presented a case of *Unusual Displacement of the Trachea by a Tumor, with Tracheotomy Tube Inserted Two Inches to the Left of the Median Line of the Neck.*

On motion, the report of the Special Committee on the

PUBLICATION OF PAPERS

was taken from the table.

DR. STRAWBRIDGE offered the following amendment as an addition to the first resolution: And that the Chairman of the Committee on Publication be authorized to publish an abstract of papers read before this Society, said publications not to interfere with the authorized yearly publications.

An additional amendment, to the effect that members shall furnish abstracts of their papers for publication to the Chairman of the Committee on Publication was offered, and on vote was declared lost.

The first amendment was then adopted, and the original resolution as amended was then passed.

MEDICAL ADVERTISING.

The following resolution was then unanimously adopted:

Resolved, That the Medical Society of the State of Pennsylvania looks with great disfavor upon the making use of its meeting as an advertising medium, and holds such practice as contemptible, and a flagrant violation of the spirit of the Code of Medical Ethics.

THE REPORT OF THE COMMITTEE TO SECURE A STATE BOARD OF HEALTH

was then presented. It stated that the bill to establish a State Board had failed in the last legislature by a single vote, but that in another year the Committee hoped to present a more favorable report.

CHANGE OF DATE OF MEETING.

DR. A. M. POLLOCK, of Alleghany, moved that when we adjourn we adjourn to meet at Scranton on the last Wednesday in May, 1885, and not the second Wednesday, as previously agreed upon. Adopted.

MISCELLANEOUS BUSINESS.

The Committee on the appeal of the American Anti-Vivisection Society was then authorized to publish its report in full and to circulate it at its discretion.

The Permanent Secretary was authorized to employ such clerical assistants as may be necessary in making abstracts.

THE APPOINTMENT OF THE ADDRESSES FOR 1885

were announced, as follows:

Surgery.—Dr. E. A. Wood, of Alleghany.
Obstetrics.—Dr. C. A. Rahter, of Dauphin.
Hygiene.—Dr. Joseph G. Richardson, of Philadelphia.
Mental Diseases.—Dr. S. S. Schultz, of Montour.
Medicine.—Dr. E. T. Bruen, of Philadelphia.
Otology.—Dr. C. S. Turnbull, of Philadelphia.

A GROSS MEMORIAL

page was ordered to be inserted in the *Transactions.*

Adjourned.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Thirty-fourth Annual Meeting, held at Florence, April 22, 23, and 24, 1884.

(Specially reported for THE MEDICAL NEWS.)

THE thirty-fourth annual session of the South Carolina Medical Association was held in the hall of the Knights of Honor, Florence, April 22, 23, and 24, 1884, THE PRESIDENT, R. A. KINLOCH, M.D., in the chair. The attendance was fair, and eighteen new members were added to the roll.

THE PRESIDENT, DR. R. A. KINLOCH, delivered

THE ANNUAL ADDRESS,

the subject being *A Plea for Education as the Means for Unifying the Profession and Strengthening the Association.* After congratulating the Association upon the celebration of its thirty-fourth anniversary, and acknowledging the kind feeling and generous hospitality of the local profession, on this the first occasion of a meeting in this section, Dr. Kinloch went on to say that, in his choice of a subject, he was guided by the idea of duty to address the Association in words of admonition and advice regarding what he considered its greatest need.

The highest aim of the Association should be to secure professional advancement, professional and social unity and harmony.

A retrospect of the past thirty-five years brings to a true lover of the profession in the State a feeling of sadness and infinite disappointment. In the address of the first President of the Association, Dr. Moultrie, in 1850, it is stated that the Society then numbered two hundred and sixty members, from seventeen districts. The present roll of the Society numbers less than one hundred and fifty, a large numerical deficiency as compared with thirty-five years ago. If it could be believed that it was the purification of the profession that had thus reduced our numbers, there might be some consolation in facing the figures. But whilst it may be fairly affirmed that this body represents the intelligence, character, and working capacity of the profession in the State; it is equally well known that there are numbers

of fitting associates who are pleased to remain outside of our organization. Doubtless they have their reasons, which it might be regarded as uncharitable to criticise, but, without arguing the question, I would appeal again and again to our recreant brethren. In the name of the nobility that attaches to our art; in the name of the great and good, whose labors have guided and supported us amidst the terrors of disease and death, and whose monuments of usefulness are seen in every clime; in the name of a civilized benevolence; in the name of the majesty of scientific truth, ever struggling for sovereignty against ignorance and superstition; and in the name of the health and life of our proud State, I would exhort every member of our liberal and enlightened profession to remember his duty, and to join our ranks with every energy pledged to the development of a noble work.

Dr. Cornelius Kolloch, of Cheraw, then read an interesting report of

A CASE OF OVARIOTOMY,

in which he had operated with success, the patient having safely recovered. He also reported a case of

PERICARDITIS FOLLOWING AN ATTACK OF ACUTE RHEUMATISM,

in which he performed the operation of paracentesis of the pericardium, introducing through the fifth intercostal space a small aspirating needle near the sternum, and drawing out fully eight ounces of sero-sanguinolent fluid. The relief was instantaneous and complete. It is now more than ten months since the operation, and the patient is in perfect health.

Dr. James Evans, of Florence, read a paper on

THE SANITARY USES OF PLANTS AND FLOWERS.

Pure air, pure water, and pure soil, indispensable conditions of a fit dwelling-place for man, can be secured in a measure, he said, by a proper selection and arrangement of trees and plants around our dwellings. In spite of all care, more or less organic matter finds its way into the soil around every house and there undergoes decomposition, polluting the air and surface water. Where trees and plants grow, the soil is traversed in every direction with a network of fine fibrous roots which feed on this matter, absorbing likewise excess of moisture and draining the soil. This moisture is afterwards exhaled from the leaves, a property of plants which, it can hardly be doubted, can be used with advantage in the alleviation if not in the cure of many distressing affections, especially of the respiratory organs, by placing in the sick room a sufficient number of plants. There is no doubt that plants also exhale, with this moisture, some of their active and peculiar principles. Examples of this are found in the rhus, which produces an eczematous eruption on the skin, the Pride of India which protects from the attacks of insects, the hemlock and other plants of the same class which produce narcotic effects upon those much exposed to the atmosphere in their vicinity. The scent of mint and thyme is due to menthol and thymol, antiseptics of the highest value, and it is not improbable that their exhalations have the same property. The eucalyptus is remarkable as a prophylactic against malaria, so much so that the French Government has had groves of them planted near forts and towns in Algiers, and localities formerly subject to fearful mortality from malarial fever, are now, since the planting of these trees, comparatively exempt from its ravages. Its leaves immersed in hot water are also said to be an efficient disinfectant in the sick-room. A residence in a pine forest has long been considered beneficial to weak lungs. These active principles of plants may, when diffused through the atmosphere, be extremely diluted, but when we remember the construction of the lungs, with their extensive absorbing surface and the continuous application of the substance during every inspiration, we can readily understand their effect. And I have no doubt that when the physiological action of plants, used in this manner, is more closely studied, they will prove of the utmost value in the prevention and remedy of disease.

Plants, by virtue of their power to generate ozone and to split up carbonic acid, absorbing the carbon and setting free the oxygen, can, when grown in our chambers, remedy to some extent the evils of bad ventilation. In Pasteur's virus-culture experiments he found that, when they were conducted under a diminished supply of oxygen, the germs retained their primitive virulence, but, on the contrary, when they had access to oxygen the virus became weaker. Now it has been known, for a long time, that marsh miasm is intercepted by a forest, and that persons living in localities so screened are exempt from attacks of malarial fever. The explanation of this is probably to be found in this discovery of Pasteur. When a cloud of malarial germs are wafted from a marsh to the neighboring forest, they encounter a continuous stream of oxygen pouring forth from every leaf, attenuating the virus and rendering it innocuous.

Dr. O. B. Mayer, Jr., of Newberry, read a paper on

PELVIC PERITONITIS AND CELLULITIS,

in which he said that both before puberty and after the menopause this disease is rare. It frequently occurs after abortion, especially if it be criminal. Its most common causes are the extension of inflammation from the uterus, absorption of septic matter from the genital tract, and exposure during or immediately after menstruation. One cause, which seems to have been overlooked by gynecological writers, is the extension of inflammation from the corpus luteum in those cases in which there is sufficient vaso-motor disturbance to produce a hyperæmic condition.

Dr. John M. Thompson, of Newberry, reported

A CASE OF SEPTICÆMIA FROM THE BITE OF A RAT.

The patient, a man twenty-five years of age, lived in an old wooden house, its foundations decayed and its walls infested with rats and filled with their accumulations of filth. Swamps surrounded the locality, and the patient had long suffered from chills and fever. On the 15th of last September, while he was trying to kill a rat, he was bitten through the palmar surface of the ring finger of the left hand, near the end. The wound gave him only momentary pain, and in a few days it had healed and was forgotten. But about ten days later the finger began to throb and give him great pain. Dr. Thompson saw him on the following morning; his finger was swollen, inflamed, and exceedingly painful, and he had some fever. Quinine and iron were given in full doses, poultices were applied, and morphia administered. In spite

of treatment, the inflammation increased, and the tension was so great that an incision was made through the entire length of the palmar surface of the last phalanx, which was followed by a discharge of bloody serum. Charcoal poultices were substituted for flaxseed, the iron was left off, and stimulants added. There was no improvement, and on October 2d the end of the finger was found to be cold, and it was evident that mortification had begun. He suggested amputation, but the patient steadily refused until October 4th, after he had called in consultation Dr. O. B. Mayer, Jr., who advised immediate amputation, and the operation was performed, with antiseptic precautions, by Dr. Mayer, by disarticulating the finger at the metacarpo-phalangeal articulation, avoiding the removal of the end of the metacarpus for fear of septic absorption. No immediate improvement followed the operation, but, on the contrary, he appeared to grow worse, and two weeks after his condition was extremely critical. The wound had healed but little, the pulse was 125 to 130, the temperature 103° to 104½°. Red spots, half an inch in diameter, which first appeared on the wrist and forearm the day of the operation, soon covered the whole body. The treatment now consisted of nitro-muriatic acid, the hypophosphites of lime and soda, and quinine. Opium was substituted for morphia with a happy effect. The diet was highly nutritious, and brandy was given freely. The wound was dressed twice daily with carbolized glycerine. He remained in this critical condition a week or ten days before any change for the better took place. Then he began to improve slowly; the fever abating, the wound began to heal, the spots to disappear, and his strength to return. During convalescence chills occurred which proved very obstinate. It was two months from the day he was bitten before he was able to walk about again.

DR. H. MCMILLAN presented a report of a case of

SEVERE ABDOMINAL WOUND, WITH RECOVERY.

On August 8, 1883, he was called to see a colored man, an engineer, who had received a wound. He found the patient in the road, where he had lain for four hours, with his bowels protruding through a severe abdominal wound, and lying on the ground covered with dirt. On examination he found an incised wound about four and a half inches in length, running obliquely across the umbilical region, and the small intestine cut half through transversely in one place, where the fecal matter had poured out freely. After removal to a house near by, chloroform was administered, the intestines were thoroughly cleansed with tepid water, and the serous surfaces of the wound were inverted and sewed up with the continued silk suture, both needle and thread being very fine. At this stage the patient vomited once and became collapsed, but ether having been administered hypodermatically, he rallied. The protruded viscera were then restored to the abdominal cavity, the abdominal wound closed, and a broad bandage passed around the abdomen. A hypodermatic injection of morphia and atropia was administered. No nourishment was taken for thirty-six hours, after which iced milk formed the diet. The bowels were controlled with opium, until August 13th, when they were evacuated by an enema. On August 17th an abdominal supporter was applied, and the patient was discharged. No antiseptics were used in the case, and no solid food was taken for ten days after the accident. The patient is now in perfect health.

After the reading of a number of other papers, the following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. A. A. Moore, of Camden.

Vice-Presidents.—Drs. C. Kolloch, of Cheraw; James Evans, of Florence; and T. J. McKie, of Woodlawn.

Recording Secretary.—Dr. John Forrest, of Charleston,

Corresponding Secretary.—Dr. H. D. Fraser, of Charleston.

Treasurer.—Dr. H.W. De Saussure, Jr., of Charleston.

The Association then adjourned to meet at Charleston, an April 23, 1885.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, April 21, 1884.

THE PRESIDENT, WILLIAM DETMOLD, M.D., IN THE CHAIR.

DR. CHARLES A. LEALE read a paper entitled

SCARLATINA OF THE FŒTUS IN UTERO, AND OF THE MOTHER AT THE NINTH MONTH OF UTERO-GESTATION.

(See page 635.)

THE PRESIDENT, in opening the discussion, remarked that it was not surprising to him that the parturient woman should be in great danger from scarlatina, since the peculiar condition of the kidneys, approaching as it often did to genuine Bright's disease, offered a sufficient explanation, he thought, of the great fatality of the disease in such patients.

DR. DWYER said that he had seen one case of scarlatina in the parturient woman, in which the mother suffered from violent eclampsia and expired at the moment of the birth of the child. The child was affected with undoubted scarlatina when born, two eminent physicians who were in attendance concurring in the diagnosis. He had, however, met with three cases in which pregnant women nursed children having scarlet fever, who escaped the disease themselves and whose infants, when born, did not have it.

DR. GOULEY thought that the peculiar form of nephritis incident to scarlatina must make the subject of the liability of parturient women to the disease of immense interest to obstetricians, since the whole abdominal circulation of such patients was impeded, while the kidneys were often intensely congested, and the renal tubes so filled with blood as to give rise to hæmaturia. If patients in this condition were fortunate enough to recover from scarlatina, it seemed to him that there was imminent danger of their being affected with permanent nephritis.

DR. LUSK said that he would only make a few remarks, which might, perhaps, serve to bring into stronger relief some of the points brought out in the paper. It was a matter of great interest, he thought, that a pregnant woman, when exposed to the infection of scarlatina, rarely developed the eruption and other signs of the disease until the occurrence of labor, or even after the birth of the child. Either the period of incubation was very long, or the poison remained dormant in the system until the time of parturition. Again, there was often an irregularity about the symptoms of scarlatina in par-

turient women; the eruption and fever, for instance, occurring simultaneously. In quite a large proportion of cases, too, there were no throat symptoms, and the patients often died before any symptoms referable to the kidneys had become developed. As to the possibility of the occurrence of a scarlatinous rash due to puerperal septicæmia, and entirely independent of the infection of true scarlatina, he had his doubts; and certainly he himself had never seen this phenomenon except in connection with the real scarlatina poison. Scarlatina in the parturient woman, as a rule, he believed, was not associated with inflammation of the peritoneum or with pelvic cellulitis. While the disease was undoubtedly to be guarded against as peculiarly dangerous at the puerperal period, it was not to be altogether lost sight of that, when it occurred among children, the result depended to a great extent on the general character of the epidemic prevailing, as well as the special circumstances connected with each individual case. Even among parturient women, then, experience had proved that in some cases the disease was very light.

Dr. Lusk then alluded to the researches of Braxton Hicks, who had maintained that the indistinct rash attributed to supposed pyæmia in puerperal women might in some cases be a scarlet fever introduced unsuspectedly from without, and that other cases of puerperal septicæmia, in which there was no rash or any of the ordinary signs of scarlatina, were in reality due to this disease. The exanthemata, he claimed, sometimes occurred without rash, the intensity of the poison in some instances causing death during the period of the incubation of the rash; so that there might be certain conditions of the human body which did not permit the ordinary manifestations of these diseases, and the sore throat and skin rash could not, therefore, be regarded as the essential characteristics of scarlet fever. For instance, the poison producing erysipelas could act fatally upon the puerperal woman without any external skin affection; and it was certainly a significant fact that puerperal disturbances were always associated with epidemics of scarlet fever. Out of 68 cases of puerperal disease seen in consultation by Braxton Hicks, no less than 37 were distinctly traced to the scarlatinal poison. Of these, 20 had the characteristic rash of the disease; but the remaining 17, although the history clearly proved exposure to the contagion of scarlet fever, as he believed, showed none of its usual signs, and were not to be distinguished from ordinary typical cases of the so-called puerperal fever.

In England, Dr. Lusk continued, the statistics showed that the child has taken scarlatina from a mother suffering from such an attack of puerperal fever; but, so far as he was aware, no instance of this kind had ever been reported in this country. The records of the New York Health Department, for nine years, showed no proportion between the relative frequency of deaths from puerperal fever and deaths from scarlatina; and Matthews Duncan had found the same thing true in the mortuary statistics of London. At the same time, he was not sure that Braxton Hicks might not be right in his views after all. If a physician should go to a case of confinement from one of scarlatina, and the case should turn out badly, he would be pretty sure to blame himself, whatever the patient died of; and, therefore, he thought that obstetricians could not be too careful in guarding against all possible chances of infection. Those who were sceptical, were likely to be very severely punished. Thus, there were one or two cases in the past, in regard to which he could not but reproach himself for not having taken as ample precautions as he might perhaps have done.

DR. S. T. HUBBARD said that in the only case of scarlet fever occurring in a parturient woman which he had met with in his practice, the attack came on upon the third day after labor. The eruption was well marked, and the patient died on the third day after its commencement. The child died on the fifth day from its birth. He could not trace the origin of the attack. He thought it was the duty of the physician to refuse to attend any lying-in women at the same time that he was in charge of a case of scarlet fever, and this precaution he had always observed in his own practice.

DR. C. S. WOOD was inclined to think that the danger of puerperal women from contagion had been somewhat exaggerated. In epidemics of scarlatina, he had always watched parturient patients who had never had the disease with much anxiety, but he had arrived at the conclusion that they were not so susceptible as many supposed. In one case that he had seen, a mother nursed a child with scarlatina for twenty-one days, and ten days after the expiration of this period she was confined; but neither she nor the new-born infant had any sign of the disease, and both did perfectly well in every respect. He had now been engaged in the active practice of medicine for nearly thirty-five years, and had never seen a case of such fever in a puerperal woman which had been carried by himself.

DR. LUSK thought that it was better not to run any risks. Some time ago he had met in consultation a gentleman of this city, who had an immense practice among the poorer classes, and who had been having very unfavorable results in his obstetric cases for some time. He could not at first realize that he himself had been the primary cause of this; but at length he became fully convinced that he had been carrying infection directly from his scarlet fever patients to his parturient women.

THE PRESIDENT said that the reason why puerpural women were not infected by scarlet fever contagion more frequently than they really were, was probably because they had mostly had the disease in their childhood, and were thus, in a great measure, protected against it.

The paper was further discussed by several members, one of whom had had experience with an outbreak of scarlatina in a large tenement-house, with a house in the rear. In the two buildings there were some thirty-eight or forty families living, and nine or ten women who were expecting to be confined. One of the latter caught the disease, and was very ill with it at the time labor occurred. The child was born alive, but she herself died three days after its birth. All the other women in the house escaped, but two neighbors who came in to see this patient took the fever, which proved fatal to one of them. Another gentleman had known of a case of scarlatina to develop a week before confinement, although the patient had had the disease in childhood. After the birth of the child, which also had scarlatina, she suffered from metro-peritonitis. A third, who had

been attached to one of the large lying-in hospitals in Vienna, maintained, with many German authorities, that there was a distinct scarlatinous rash which was called forth by the puerperal state, not being produced by the contagion of scarlatina or communicable from the patient to other persons, and which could be readily diagnosticated by the symptoms present from true scarlatina.

DR. AUSTIN FLINT, SR., said that personally he had seen no case of scarlatina occurring during pregnancy or in the fœtus in utero, but he had met with one instance of the disease occurring immediately after delivery. This was one which he saw in consultation with the late Dr. J. O. Stone, of New York. The patient was twenty-eight years old, and her second child had been born two days when the eruption of scarlet fever appeared on her, although she had previously had the disease. He first saw the case four days after the appearance of the eruption, the lochia and milk having then both been checked. The urine was slightly albuminous, but within twelve days she was convalescent. Two weeks afterward, however, she was seized with an attack of rheumatism, accompanied by abundant albuminuria and a somnolent condition, and this rapidly proved fatal. No autopsy was made. The child contracted the disease from the mother, and, therefore, he thought it reasonable to suppose that the former contracted it either just before or just after delivery.

In connection with the subject of scarlatina in general, he wished to make a few remarks, and the first was in regard to—

1. *The vitality of the contagion of scarlet fever.* In 1862, he said, a case occurred in a New York boarding-house. As soon as the child was able to be moved, it was taken away, and the rooms occupied by the family were thoroughly cleansed. In three days afterward, another family moved into the same apartments, and in two days a child belonging to the latter was taken with the disease. Dr. Flint then related the case of Miss G., the daughter of a deceased New York physician, who had been well known and highly esteemed in the community. Having entered the Protestant Sisterhood of St. Barnabas, she was called upon to nurse a child suffering from scarlet fever; and after she had finished her attendance on the child, she hung up her clothing to air for several weeks. She then gave away the waist of the dress that she had worn, and put the skirt away in a trunk. It was in February, 1870, that she nursed the scarlet-fever patient, being in attendance for ten days. In January, 1871, she wore the skirt for the first time, and one week afterwards was herself attacked with acute diffused nephritis and pulmonary œdema, which proved fatal. The lesson of these cases, therefore, was the necessity for effective disinfection in all cases of scarlet fever.

2. *The frequency of acute nephritis from the scarlatinal poison.* The kidney complication was not due to cold, as was often imagined, but to the nature of the disease itself, and, hence, on account of the increased danger with which it was thus imbued, there was all the more necessity for physicians taking every possible precaution against conveying the contagion to other patients.

3. *Atypical cases are liable to occur in which there is no eruption.* In 1874, he saw a case in which there was no eruption and no sore throat, but acute desquamative nephritis occurred, and also desquamation of the skin.

4. *Heart thrombosis may prove fatal in scarlatina.* In one autopsy which he saw there was a firm clot in the right ventricle, extending into the pulmonary artery.

5. *Cold baths are of great service in reducing the temperature.* For more than fifteen years he had resorted to this measure in appropriate cases, with very satisfactory results.

6. *In the essential fevers alcohol has a marked beneficial effect.* In the light of our present knowledge, he thought it of interest to inquire whether this agent did not act in reality as a germicide in such fevers, and whether its sustaining effects were not due to this property.

DR. E. G. JANEWAY related the case of a physician in New Mexico who, after having attended a scarlet fever patient, had occasion to go to see a patient in a town twenty miles distant, in which, as he subsequently took special pains to inquire, there was absolutely no scarlet fever; yet, one week after his visit, the disease appeared in the family which he had gone to see. Similar instances of the carrying of the contagion for long distances had been reported in the *Practitioner* by physicians living in rural districts in England.

DR. LEALE said, in closing the discussion, that he believed that there was a distinction between scarlatina and septicæmia, just as the so-called scarlet rash in children, which was produced by septic poison from inflamed tonsils, was entirely distinct from true scarlatina. In the case of the family whose unfortunate experience with scarlatina he had related, the entrance of the disease was positively not due to septicæmia, because, *first*, the mother had scarlatina before the child was born; *second*, the infant was born with the disease; and, *third*, the monthly nurse also took it. As to the susceptibility of puerperal women to infection from scarlatina contagion, he did not believe this was very great. This was due, to a great extent, to the age of the patients. That the disease sometimes attacked the fœtus in utero, there was now, he believed, ample evidence, both in this country and in Europe. The point that he wished particularly to impress, was the extreme danger which the parturient woman underwent in case she should be so unfortunate as to contract scarlatina; so that, even though the chances of her doing so were small, the mere possibility of such disastrous consequences ought to be sufficient to cause us to use every precaution in preventing any exposure to the risk.

THE MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA.

Seventeenth Annual Session, held at Clarksburg, May 21 and 22, 1884.

(Specially reported for THE MEDICAL NEWS.)

WEDNESDAY, MAY 21ST—FIRST DAY.

THE Medical Society of the State of West Virginia convened at 3.30 P.M. The Chairman of the Committee of Arrangements, DR. D. PORTER MORGAN, extended to the members a warm welcome in a brief address, in which he refered to the advantages to be derived from these annual meetings.

GEN. R. S. NORTHCOTT, the Mayor of Clarksburg, then welcomed the Society to the City in an eloquent address.

Owing to the necessary absence of both the President, Dr. A. Gerstell, of Keyser, and the First Vice-President, the Chair was taken by the SECOND VICE-PRESIDENT, DR. A. F. STIFEL, of Wheeling.

The following fraternal delegates were introduced, and invited to participate in the deliberations of the Society: Drs. George H. Rohé and J. W. Chambers, of Baltimore, from the Medico-Chirurgical Faculty of Maryland; and Dr. J. W. Hoff, of Pomeroy, from the State Medical Society of Ohio.

A number of applications for membership were received and referred to the Board of Censors.

REPORTS.

The report of the Committee on Publication was presented by the Chairman, Dr. J. E. Reeves. Among other items, the Committee reported adversely on a proposition referred to it last year, looking to

THE ESTABLISHMENT OF A MEDICAL JOURNAL

in lieu of the annual volume of *Transactions*. The Committee thought the profession already has more than a sufficient number of journals, and that the effort to start a new one in West Virginia would probably prove a failure from want of adequate support.

The annual report of the Treasurer showed the Society to be in a good financial condition, a considerable balance being carried over from last year.

The Secretary's report indicated a small increase in the membership of the Society. Four members have died during the year.

A REPORT ON CLIMATOLOGY AND EPIDEMICS,

by DR. R. W. HALL, Chairman of the Committee, was read by the Secretary. The author gave a brief account of the climatology of the State, spoke generally of the effects of our mountains and high hills on air currents, and, indirectly, on the humidity and temperature of the atmosphere.

"It may perhaps be thought that during the hot months the mortality would likely be highest from diseases of the alimentary canal; yet we are persuaded, from the results of our inquiries throughout the State, that were we to deduct the deaths from bowel complaints from the deaths caused by diseases of the organs of respiration, there would be found a large per cent. still to remain. We therefore infer that the highest mortality is during that period when the earth's surface is cooler than the surrounding atmosphere, and that persons living on high hills are less likely to be afflicted with diseases of the organs of respiration, or diseases resulting from sudden changes of temperature, than are those living in the low valleys."

The remainder of the report contained very brief allusions to some of the more prevalent diseases during the past year. "The State has been unusually favored during the year, not having had any severe epidemic. The diseases most prevalent have been those of the respiratory apparatus. Bronchitis heads the list. This disease among children was frequently of the capillary variety, and such cases were attended, as usual, with a high rate of mortality. Next in frequency was pneumonia, which was usually very fatal, especially where it attacked both lungs. Laryngitis comes next, occurring in many parts of the State, notably in the eastern and northwestern sections. The disease generally commenced like an ordinary cold, ran a definite course, and usually ended in recovery. Pharyngitis also occupied a prominent place in the list of prevailing diseases, but the average duration was short, and the disease mild and manageable. Diphtheria prevailed over nearly two-thirds of the whole State. Typhoid fever has been present in nearly every section of the State, but has not been epidemic. Several epidemics of measles occurred in different localities of the State, most notably in Harrison and Marshall Counties.

The Board of Censors reported favorably on the applications of the following physicians, who were then

ELECTED TO MEMBERSHIP:

Drs. J. W. Cooper, of Willsburg; John L. Dickey, of Wheeling; Eugene Hoyt, of Wheeling; A. L. Hupp, of Lumberport; Bascome Baker, of St. George; S. H. Austin, of Lewisburg; O. T. Bond, of Rockford; C. C. Hersman, of Weston; L. D. Frum, of Sardis; M. J. Brabelle, of Clarksburg.

THURSDAY, MAY 22D—SECOND DAY.

DR. C. T. RICHARDSON, FIRST VICE-PRESIDENT, in the Chair.

A REPORT ON NEW REMEDIES,

prepared by Dr. REED M. BAIRD, of Wheeling, was read by the Secretary. The remedies discussed were *convallaria*, of which the writer remarked that "all reports of results agree that it is inferior to digitalis as a cardiac tonic," jequirity, kairin, and paraldehyde.

DR. FLEMING HOWELL, of Clarksburg, then reported

A CASE OF ŒSOPHAGOTOMY FOR THE EXTRACTION OF A SILVER FIFTY-CENT PIECE.

(See page 639.)

DR. BLAND, Superintendent of the State Asylum for the Insane, stated that Dr. Camden and himself had performed this operation on one of the patients in the Asylum, for the removal of a fish-bone, but the case terminated fatally.

EXPERT TESTIMONY.

The following resolution, offered by Dr. Fleming Howell, was adopted:

Resolved, That a committee of four members of this Society be appointed, whose duty it shall be to memorialize our next Legislature upon the subject of expert testimony, and to endeavor to secure the passage of a law giving to physicians who are summoned before the courts of the State as experts an extra special fee, to be determined by the court.

Drs. George Baird, J. E. Reeves, L. D. Wilson, and Fleming Howell were appointed the committee.

DR. GEORGE H. ROHÉ, of Baltimore, read a paper on the

TREATMENT OF THE LATER SYPHILITIC LESIONS OF THE SKIN AND SUBCUTANEOUS CONNECTIVE TISSUE,

in which he expressed the opinion that the view of Hutchinson, that the so-called tertiary manifestations of syphilis are merely sequelæ, and not symptoms of the syphilis, could not be accepted without more definite evidence in its favor than has as yet been furnished.

The tubercular syphilide and the subcutaneous gummata were regarded as anatomically identical. The author said the prognosis of syphilis was generally fav-

orable. He regards it as a curable disease, and deprecates the hopeless prognosis given by so many authorities. In the treatment of tertiary syphilitic lesions, iodide of potassium holds the first place. It should be given in free doses; twenty grains, four to six times daily, are sometimes necessary to produce the effect desired. Mercury is of much less value in this than in the secondary period, but should not be entirely omitted. Tonics are of importance in all stages to counteract the spoliative effect of the disease upon the red corpuscles. Good food, fresh air, cleanliness, and moderate exercise should be insisted upon. Cod-liver oil and iron, in the form of tincture of the chloride or pills of the protocarbonate, are often indicated. Locally, the application of mercurial plaster to the lesions before ulceration, assists in promoting their absorption. After ulceration, the syphilitic infiltration should be scraped out with the curette, and iodoform applied.

DR. W. H. SHARP, of Volcano, next read a paper entitled

LISTERISM IN OBSTETRICS—SHALL WE ADOPT IT IN GENERAL PRACTICE?

It contained an exhaustive review of the recent literature. It referred to the small mortality from puerperal affections even in large cities, and claimed that in smaller towns and in the country puerperal fever is a rare disease. Statistics were given which tend to show that in this country the enforcement of such stringent rules as are often laid down are not necessary. Nor is it necessary to practise so strictly personal disinfection when attending infectious cases.

DR. J. W. CHAMBERS, delegate from the Medico-Chirurgical Faculty of Maryland, then read a paper on *Cerebral Localization, with Illustrative Cases.*

DR. J. P. MILLER read a paper on *Phthisis; its Successful Treatment.*

A paper by DR. J. E. REEVES, *The Importance of the Microscope in the Practice of Medicine, with Illustrations*, was read by title and referred to the Committee on Publication, the author having been prevented by recent illness from completing it in time for the meeting.

DR. C. M. FRISSELL read a paper prepared by his venerable father, Dr. John Frissell. A number of surgical cases of greater or less interest were detailed. One was

A CASE OF ABSENCE OF VAGINA, UTERUS, AND OVARIES

in a married woman æt. 33 years. In external appearance the mons veneris, labia majora, the nymphæ, clitoris, orifice of the urethra (large enough to admit the forefinger), and the hair covering the parts, were all natural. Below the dilated orifice of the urethra was a small sulcus, but there was a perfect closure of the entire region that should have formed the external opening of the vagina. She had never menstruated, but did not think much of that, for she supposed some girls were troubled in the same way. Her sexual appetite, she thought, had been about the same as that of other girls. The breasts were not large, but appeared normal. Her general appearance was that of "a perfectly developed woman." At a second examination, the doctor "introduced a catheter into the bladder, and the fore and middle fingers of the left hand into the rectum. Through the wall of the rectum and the thick layer of cellular tissue he could feel the catheter in the bladder, but failed to find any solid body that he thought was the uterus or its appendages." The following operation was performed: After cutting out enough of the skin to make about a natural sized opening for the vagina, thus fairly gaining admission into the cellular tissue, he separated the layers with the right forefinger, holding the perineal tissue with the left thumb, the first and second fingers in the rectum forming a floor upon which to work. With the catheter above in the bladder and fingers below in the rectum, he could evenly direct his way about equidistant between these organs, and succeeded in making a division as far as he could reach with his right forefinger. He then placed in the opening a rectal dilator, and gradually spread the parts open until there was ample room for dilatation and contraction. He then introduced a bivalve vaginal speculum, and through it passed in pledgets of borated cotton saturated with carbolized water, each having a string attached, until the cavity was well filled. There was but little hemorrhage. The woman complained very little of pain, although, at her own request, no anæsthetic was given. The pledgets of cotton were changed every day or two for a week, when glass dilators were substituted. In about twelve days the patient left the hospital, well satisfied with the result of the operation. She took dilators of two sizes with her, promising to report if everything did not do well. She has not since made her appearance.

THE ELECTION OF OFFICERS

for the ensuing year resulted as follows:

President.—Dr. George Baird, of Wheeling.

Vice-Presidents.—Drs. T. A. Harris, of Parkersburg; R. R. Frey, of Terra Alta; and S. H. Austin, of Lewisburg.

Treasurer.—Dr. John A. Campbell, of Wheeling.

Secretary.—Dr. S. L. Jepson. of Wheeling.

Board of Censors.—Drs. J. H. Manown, L. C. Hunt, J. H. Brownfield, J. O. Wall, J. M. Bowcock, W. J. Bland, and B. W. Allen.

Weston was selected as the *place of meeting* for next year's session.

After the usual resolutions of thanks, the Society adjourned.

NEWS ITEMS.

LONDON.

(*From our Special Correspondent.*)

THE LONDON MEDICAL SOCIETIES.—The activities of the sessions of the medical societies are on the wane. The *Medical Society*—the last to begin, and the first to end, though during its session the most occupied—closed its meetings on May 5 last, when a *conversazione*, preceded by the annual oration, delivered by Dr. Theodore Williams, was held. No less than four of the principal societies met last week. The proceedings of the *Pathological Society* were not of the liveliest, and most of the members voted the evening flat. There was a large exhibition of card specimens, and this was certainly the most entertaining portion of the work.

At the *Ophthalmological Society* several good drawings were shown. Dr. Stephen Mackenzie read a paper

on extreme tortuosity of the retinal vessels. Mr. Morton communicated a paper on hemorrhage about the yellow spot which, as Mr. Jonathan Hutchinson observed, seemed to be related in some way to the gouty diathesis. A drawing was exhibited by Mr. Nettleship illustrative of peculiar changes in the choroid after papillitis taken from a man with symptoms of cerebral tumor. Straight parallel pigmented lines were to be seen, which, it appeared, might be produced by puckerings of the choroid, or might have been the consequence of a previous œdema. A remarkable case of "Tay's" choroiditis, or central guttate choroiditis, with perfect preservation of sight, was spoken of, and a colored drawing shown. This patient had also entire paralysis of accommodation, although she was not of that age at which presbyopia is mostly found. Dr. Adam Frost exhibited a specimen of ossification of the choroid giving rise to repeated attacks of sympathetic irritation. The bony stuff was the result of an injury sustained three years previously. Other examples of detachment of the retina—one from injury and another from blood-clot—were shown. The question of monocular diplopia came under consideration from a paper read by Dr. James Anderson and Mr. Gunn. Many members discussed this paper, and there seemed to be a concurrence of opinion on one point, viz., that when this peculiar form of diplopia was present, there generally also existed some weakness of the external rectus of the same eye. A case of nævus of the choroid also attracted some attention. It was associated with a port-wine mark on the face of the same side. Dr. Stephen Mackenzie referred to Dr. Allen Sturge's case of epileptiform seizures on the opposite side of the body to the nævoid condition of the face and choroid. The suggestion was made by Dr. Sturge that the epileptiform attacks might have been due to a similar condition of some of the cerebral vessels. Dr. Brailey was interested in the apparent determination of coarse tissue-changes by the vascular disease of the choroid. There was a layer of fibrous appearance, and in this was a small plaque, bony, or something like bone. In nævoid skin, no such alterations could be detected. Mr. Nettleship also referred to Dr. Sturge's case in this respect for myopia, and a darker tint existed in the choroid which possessed the tortuous vessels.

At the *Clinical Society*, the chief interest of the last weeks was surgical, though widely different regions were dealt with. Mr. Clutton read a paper on a case of intestinal obstruction, due to a Meckel's diverticulum, in a boy aged ten years. This case was treated by abdominal section, with recovery. The operation was performed on the third day of the disease. Mr. Treves spoke on the paper, and remarked that out of thirty cases of operations for intestinal obstruction, collected by Peyrot, only eight recovered; out of this number, four cases were due to strangulation by a diverticulum, and of these there was but one recovery. Mr. Treves had brought together twice Peyrot's number of cases, without arriving at a different result; but it must be remembered that there was a great tendency for operators to record successful, and not to publish unsuccessful cases. Dr. Coupland congratulated Mr. Clutton on his success, which he thought was due to prompt interference. Many interesting details were mentioned, amongst them one in which a depression at the umbilicus was found to be due to traction from a persistent vitelline duct, distended with intestinal material, and adherent at the navel. Dr. Mahomed did not agree with the statement made by Mr. Treves, that complete obstruction is always associated with continuous, and not a paroxysmal pain. Mr. Lymonds thought that a median incision was to be preferred in all cases. Mr. Henry Morris mentioned a case of reduction of left inguinal hernia *en masse*, in which, by a median abdominal section, he had relieved the constricted gut. Dr. Christopher Heath followed with a short paper on the treatment of recent fractures of the patella. He advocated the aspiration of the joint, so as to relieve the fluid distention; but showed cases which he regarded as so good that Lister's plan of wiring the fragments together was considered an unnecessarily severe procedure. The discussion on this occasion was not warm. It could not compare with the heat of the debate on the same subject at the Medical Society in the early part of the session. We could not say, "even our ashes glow with their wonted fire!" Dr. Whipham read notes of a case of hydrocephalus, followed by insanity and death.

Quarantine Conference.—A conference of State Board of Health Officers of the Gulf States is to be held at New Orleans on the 2d prox., for the purpose of considering the best means of protecting those States from yellow fever. A somewhat similar conference is to be held by some of the Northern State health officers at Brooklyn, New York, next month, who meet to devise some plan for a general quarantine for the United States.

Quarantine Precautions in Texas.—The State of Texas has virtually declared non-intercourse with all ports and places south of 25° north latitude, and Matamoras quarantines all travel by land from points south.

Cholera.—Weekly consular reports from Calcutta show an increasing mortality from cholera, as follows: For the week ending March 29th, 157 deaths; week ending April 5th, 177 deaths; week ending April 12th, 253 deaths. The consul further states that "the death rate is very high and the cholera is very severe in the northern town."

Yellow Fever.—Consular reports from Rio de Janeiro show 59 deaths from yellow fever at that place for the two weeks ending April 19th.

Central New York Medical Association.—At the annual meeting of this Association, which is composed of delegates from eight central counties of the State of New York, held May 20th, Dr. Ely Van de Warker, of Syracuse, was elected president, receiving twenty-two votes against seven cast for the "New Code" candidate.

The German Cholera Commission, Drs. Koch, Gaffky, and Fischer, returned to Berlin from Calcutta on May 3d. Dr. Ewald, in an editorial announcement of their arrival, in the *Berliner klinische Wochenschrift* of May 12th, says: "It is seldom that a scientific expedition is conducted with so great moderation in every respect, and for every interest, as this,

upon which the eyes of the nation, from the Emperor down to the most obscure man, have been directed with active interest."

The Commission has been received with great honors, but the honors of the Government have not been empty. In the Reichstag, Herr von Bötticher brought forward a Bill to place the sum of 135,000 marks (over $30,000) at the disposal of the Emperor, in order to reward the members of the German Cholera Commission for their brilliant and important discoveries in Egypt and India. Herr von Bötticher, in proposing the bestowal of the honorarium, spoke in very graceful terms of the services of this Commission: "It was entirely owing to Dr. Koch's readiness to place himself at their disposal that the Government was able to send out the Commission so quickly." The Bill was passed, on May 13th, by acclamation, when Professor Virchow welcomed this, the first occasion, as he said, on which he had ever been able to give his full support to the Government, and paid a high compliment to the energy, the diligence, the intelligence, and the disregard of danger, which had won for German science such a splendid victory. But, though Dr. Koch had discovered the bacillus or germ of cholera, medical men should not be too sanguine about the future prevention and cure of the disease.

Of the sum, 100,000 marks will be assigned to Dr. Koch, the chief of the Commission, and the rest divided among his colleagues. A less substantial, though equally honorable, reward has been conferred on Dr. Koch, in the shape of a high decoration—the Crown Order of the second class, with the star; and Fischer and Gaffky with the Order of the Red Eagle. Lastly, at a sitting the other day of the Imperial Board of Health, the great nosological explorer, in addition to being officially eulogized for his successful researches, was presented with a life-size bust of the Emperor, by a distinguished German sculptor.

The Presentation of Prof. Stillé's Portrait to the University of Pennsylvania.—The fact that the late Commencement of the University of Pennsylvania was the last one at which Prof. Alfred Stillé would appear as an active teacher, made the occasion one of unusual interest. The President of the Graduating Class, Dr. Batchelor, presented to the Trustees, for the class, a full-length portrait of Prof. Stillé, and made a neat and appropriate address.

Dr. Weir Mitchell, as Chairman of the Committee on the Department of Medicine, received the picture for the Trustees in the following speech:

Our present commencement exercises will be memorable for most of us, because with them we lose the services of Alfred Stillé, now for twenty years Professor of the Theory and Practice of Medicine in the University of Pennsylvania. In accordance with an ancient usage, the medical class which has the honor to be the last which shall hear him lecture presents to-day his portrait to the University. In the name of the Trustees, and as Chairman of their Committee on the Department of Medicine, it is my very pleasant duty to accept the gift and to thank those who give it. It has been the habit on these occasions to add little to the remarks made by the orator who speaks for the class, but as this is the last time when Professor Stillé is associated with us officially in public, I should misrepresent my colleagues of the Trustees if I did not frankly use the opportunity to say how pleasant have been our mutual relations, and how honest is our regret that he can aid us no longer. There are many good men who do their duty well in life, and who, stepping aside, fail to leave with those for whom they labored and who may have loved them, any strong or vivid remembrance. There are others who are so distinct as individuals, so impressive as human beings, that over and above the intellectual work they perform, they insist, as it were, by the value of many social qualifications, in being remembered and readily brought back to mind. Of this latter class is the man we part with to-day—a man not lightly to be let go and not easy to forget.

Henceforward, we can claim from him only encouragement and moral support. He has said for us and to you his last words of wisdom and instructive counsel, and for him the hour must have a solemnity of parting akin to that graver cessation of duties which soon or late will come to one and all of us. He has lived with us long enough to see that which he has through his life written for and spoken for—the lifting of medical education to a place which makes your diplomas the best, because the hardest to get, in this country. He may feel sure, also, that we mean every year to make them harder to win, until we place the medical education of this University on a level which would satisfy even the affectionate ambition for his *Alma Mater* of the Professor we part with to-day. Let us congratulate him on having lived to see his ideas victorious, and thank him, in the name of all physicians, for his share of the work.

Here, to-day, I can hardly say of him what as colleagues, friends, or Trustees we feel, as the natural expression of long years of pleasant association without a sensation that he may shrink from what he would call flattery. But for the classes before me, for you at least I may speak in anticipation of the just verdict of your future years. In days to come, when you are middle-aged or gray, and rich like him in the good opinions of your fellows, many of you, returning to our halls, will stray through the great Museum, in which shall hang this portrait of your master and friend. I can imagine you then passing in review the thought-filled face of Rush, the gently humorous look of Chapman, the gravity and pleasantness of Wood, the countenance earnest almost to anxiety of the elder Pepper, and pausing, full of memories, before this picture of a man well liked, to recall the share he had in modelling your lives in those plastic hours when the soft clays of youth were hardening into the characterizing lines of manhood.

If, in those years of fulfilment, you have risen by honorable means to places of trust, you will feel that you owe something to him who but of late taught you with the impressiveness of one speaking for the last time to you, that "only two things are essential, to live uprightly and to be industrious." I thought, as I read his words, that they made up a pleasant little bit of autobiography. If, in days of personal sorrows, and of the calamities that await us all in life; or if, weary with the sad company of pain, or depressed by defeat in some vain struggle against death—if then you turn to books for an hour of forgetfulness, you will recall with gratitude that it was this scholarly lover of books, whose portrait reminds you of the time when he taught you

this solace, and helped by word and example to give you a constant and reverent love for the great dead—dead but yet alive, as souls live. I can imagine you thus, reflecting how strangely some men get their characters into their faces, as you have brought back to you by the strong and refined lineaments of his picture that expression of courteous gravity in the teacher who taught you by the subtle education of each day's contact in the lecture-room, how attractive is the charm of manners which are the outcome of thoughtfulness of others, and belong to the very poetry of social conduct.

You who have lived by his lessons will owe him in truth a just debt, if being a scholar he taught you to love books, if being a writer he showed you an example of accuracy, constructive skill, and high critical acumen unstained by personalities, if being a physician he taught you to hold fast to honorable and reasonable traditions.

Prof. Stillé has told you in the grave and high-minded address with which he closed his career as a teacher, that no true man lives up to his ideals, because the great world of self-demands grows, widening before us with increase of knowledge, like the horizon of the growing morning with increase of light. But no matter what may be his own severity of self-judgment to-day, we, at least, who have known him well in certain relations as you have in others, must feel that we cannot let him go hence without assuring him how well his life-work with us has illustrated the best standards of the teacher, the physician, and the gentleman.

Let me hope for you to whom we are indebted for this portrait of Alfred Stillé that when each of you, too, comes to lay down your burdens it may be with a soul as justly tranquil as his must be in the reassuring consciousness of duties amply done, and amidst regrets which will then be deepest among those who know you best.

And now, finally, in the name of the Trustees of the University of Pennsylvania, I thank Professor Stillé for the noble work of his twenty years of teaching, and beg him to feel sure that in placing his portrait in the goodly fellowship of his predecessors we recognize what his life, his lectures, and his writings have done to add to our strength and to embellish our most cherished traditions. Personally, and for the great profession to which we both belong, I thank him for the fair example of a true and wholesome and dutiful life, and wish him in his retirement many years of health and strength, and, as Bacon said, goodly and bountiful company of friendly books.

A New Thermostat.—Dr. Reichert, of the University of Pennsylvania, has made an important advancement in the construction of thermostats. He has invented an instrument which is graduated and can be set before using for any temperature between 20° C. and 100° C., or over, and which works with considerable accuracy. The construction is simple, and the principle of its action essentially the same as in other thermostats, being dependent upon the expansion of air which forces a column of mercury in a tube in contact with a cut-off for the supply of gas, so that when a proper temperature is reached the supply of gas is automatically cut off, or if the temperature becomes diminished is allowed to flow. The range of temperature is obtained by the use of a graduated plunger of peculiar construction which forces the column of mercury towards or from the cut-off, thus necessitating the presence of a less or greater amount of heat to maintain the column of mercury at this point.

The American Climatological Association.—The first annual meeting of the American Climatological Association was held in Washington, D. C., May 3d and 5th. In the absence of Prof. Loomis, the President, Dr. F. I. Knight, of Boston, the first Vice-President, occupied the Chair.

The first day was occupied in adopting a suitable constitution and by-laws. The second day was devoted to the reading of papers as follows: Address by the Presiding Officer, Dr. Knight. "The Etiology of Pulmonary Phthisis," by Dr. B. F. Westbrook, of Brooklyn; "The Effects of Sea Air upon Diseases of the Respiratory Organs," by Dr. Boardman Reed, of Atlantic City; "The Relation of Laryngeal Disease to Pulmonary Diseases," by Dr. F. H. Bosworth, of New York; by Dr. Charles Dennison, of Denver, Col., on "Dryness," in which he dwelt on the following points: "Variability *versus* Equability. A rule for classifying climates as to desirability, based upon low, absolute and relative humidities, and preponderance of sunshine. The influence of elevation, sunshine, cold, etc., in producing desirable dryness. The physical effect of dryness on man;" "City Life and City Air Injurious to Consumptives," by Dr. Donaldson, of Baltimore; "The Use of Compressed and Rarefied Air as a Substitute for a Change of Climate in the Treatment of Pulmonary Diseases," By Dr. J. Solis Cohen, of Philadelphia.

The following officers were elected for the ensuing year:

President.—Prof. A. L. Loomis, of New York.

Vice-Presidents.—Drs. F. I. Knight, of Boston, and W. H. Geddings, of Aikens, South Carolina.

Secretary and Treasurer.—Dr. J. B. Walker, of Philadelphia.

Council.—Drs. J. H. Tyndale, of New York; E. T. Bruen, of Philadelphia; E. D. Hudson, of New York; Frank Donaldson, of Baltimore; Beverly Robinson, of New York.

State Medical Society Meetings.—The Kentucky State Medical Society will meet at Bowling Green, on Tuesday, June 3d, and the Wisconsin State Medical Society will meet at Milwaukee on the same day.

Ontario Medical Association.—The fourth annual meeting of the Ontario Medical Association will be held at Hamilton, on Wednesday and Thursday, June 4 and 5 next.

The Medical College of Virginia.—The Board of Visitors of the Medical College of Virginia met a few days ago for the purpose of electing professors to the following chairs: To the Chair of Obstetrics, made vacant by the death of Prof. Coleman; to the Chair of Practice of Medicine, made vacant by the resignation of Prof. McCaw; to the Chair of Anatomy, made vacant by the resignation of Prof. Tompkins; to the Chair of Materia Medica and Therapeutics, made vacant by the resignation of Prof. James.

R. T. Hubard, John F. Lewis, George Harrison, and R. B. Berkeley, who were appointed by Gov. Cameron to fill vacancies on the Board, appeared and presented their commissions. The Board decided to postpone the election of professors until the 6th of June, to accommodate the new members.

LONG ISLAND COLLEGE HOSPITAL.—The twenty-first annual commencement of this institution was held on May 21st, in the Brooklyn Academy of Music. The degree of M.D. was conferred upon forty-four graduates.

OBITUARY RECORD.—CHARLES ADOLPHE WURTZ, the distinguished chemist, a member of the Institute and of the Academy of Medicine, died in Paris on Monday, May 12th, in the sixty-seventh year of his age. He was born in Strassburg in 1817. He studied in the School of Medicine in Strassburg, and from 1839 to 1844 was Instructor in Chemistry. In 1845 he went to Paris, to take charge of the department of Organic Chemistry in the Medical Faculty of the University. He was made a member of the Academy of Medicine in 1856. In 1875 he was made Professor of Organic Chemistry in the Scientific Faculty. He was the recipient, in 1865, of the Biennial Prize of the Academy of Sciences, and 20,000 francs, established by the Emperor, and in 1878 of the Faraday Medal of the English Royal Society. In 1867 he was elected to the Academy of Sciences as the successor of M. Pelouze. He made many important discoveries in chemistry, which were made the subject of elaborate memoirs, and contributed to the *Annales de Chimie et Physique* and to the *Répertoire de Chimie Pure*. He had been the editor of the latter since 1858. He published many separate treatises on chemical subjects.

NOTES AND QUERIES.

DR. SUTTON'S STATISTICS OF ABDOMINAL SURGERY.

To the Editor of THE MEDICAL NEWS.

SIR: In the issue of your valuable Journal for this date, in the report of the meeting at Washington, the following occurs: "Dr. Sutton, in conclusion, said that the statement of the low foreign mortality and its causes had not been refuted; his own first seven cases were fatal. After having observed the practice abroad for eighteen months, and having again had four failures in succession, he perceived his error and opened a private hospital. His seven ovariotomies therein performed have all been successful, and his highest temperature rise has been 101.5 F."

This statement, so far as it relates to my statistics, is incorrect. I have opened the abdomen nineteen times. Of these patients, eleven have recovered and eight have died—*a mighty bad record in view of foreign statistics*. But, out of my first seven cases, three recovered. These were done before I went abroad. After my return I lost four out of my first five cases. My last seven, done in my private hospital, have all recovered. These nineteen abdominal sections were made for a variety of abdominal diseases.

Of the eleven patients who are living, one was subjected to ovariotomy plus enterotomy; four inches of the small intestine were removed. Two had supravaginal amputation of the uterus and both ovaries; one had double ovariotomy for large cystic ovaries and supravaginal amputation of the uterus at the same time. In two the tumors were multilocular, thirty-eight and forty-six pounds respectively, with extensive adhesions to the liver and intestines. In another a cyst was ruptured, and there was slight peritonitis at the time of operation. Nearly all the ovarian tumor cases had been tapped, several of them frequently, and only three of the eleven laparotomies were simple cases. Of the eight which were lost, there was not one simple case. So the record stands, 19 laparotomies, with 11 recoveries and 8 deaths.

Among the eleven cases of recovery, six children have been born to two mothers; one operated on in 1875 and one in 1876. If we add these six lives to the eleven cases of recovery, it gives us seventeen lives directly the result of my nineteen laparotomies. Therefore, if the books are kept right on the "other side," I am nearly square. Very truly yours,

R. STANSBURY SUTTON, M.D.

PITTSBURG, May 10, 1884.

SKIN AFFECTIONS FOLLOWING THE ADMINISTRATION OF BORAX.

To the Editor of THE MEDICAL NEWS.

SIR: Will you kindly grant me the use of your correspondence columns to request from any physician, who may have observed squamous or other pathological conditions of the skin following the internal administration of borax (whether for epilepsy or not), very brief notes of the cases for publication?

Treatises upon diseases of the skin do not appear to recognize such conditions; yet they have been observed in England by Gowers, and other writers upon mental and nervous diseases, as also in Boston, in this country.

Very respectfully,

EDWARD WIGGLESWORTH, M.D.

79 BOYLSTON STREET, BOSTON, MASS.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 13 TO MAY 26, 1884.

WATERS, WILLIAM E., *Major and Surgeon.*—Ordered to report for temporary duty to the Commanding Officer at Plattsburg Barracks, N. Y.—*Par. 4, S. O. 90, Headquarters Department of the East*, May 10, 1884.

HUBBARD, VAN BUREN, *Major and Surgeon.*—Relieved from further duty at Fort Stanton, N. M., and ordered to Fort Bayard, N. M., for duty.—*Par. 3, S. O. 96, Headquarters Department of Missouri*, May 12, 1884.

MOSELEY, E. B., *Captain and Assistant Surgeon.*—Assigned to temporary duty at Vancouver Barracks, Wash. Terr.—*Par. 6, S. O. 59, Headquarters Department of Columbia*, May 8, 1884.

WILCOX, TIMOTHY E., *Captain and Assistant Surgeon.*—Assigned to duty at Washington Barracks, D. C.—*Par. 2, S. O. 90, Headquarters Department of the East*, May 10, 1884.

WALES, P. G., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Old Fort Colville, Wash. Terr., until further orders.—*Par. 3, S. O. 58, Headquarters Department of Columbia*, May 7, 1884.

STERNBERG, GEORGE M., *Major and Surgeon.*—Relieved from duty in the Department of the East, and ordered to report to the Surgeon-General of the Army for temporary duty.—*Par. 2, S. O. 115, A. G. O.*, May 17, 1884.

MAGRUDER, DAVID L., *Lieutenant-Colonel and Surgeon.*—Ordered to be relieved from duty as Medical Director, Department of the Missouri, and to proceed to Philadelphia, Penna., and assume duties of Attending Surgeon and Examiner of Recruits in that city.

FRYER, BLENCOWE E., *Major and Surgeon.*—From Department of Missouri to Department of Dakota.

EWEN, CLARENCE, *Captain and Assistant Surgeon.*—From Department of Missouri to Department of the Platte.

STRONG, NORTON, *First Lieutenant and Assistant Surgeon.*—From Department of the Platte to Department of Missouri.—*Par. 7, S. O. 113, A. G. O.*, May 17, 1884.

HALL, WM. R., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Stockton, Texas.—*Par. 1, S. O. 63, Headquarters Department of Texas*, May 19, 1884.

WILSON, GEORGE F., *First Lieutenant and Assistant Surgeon.*—Ordered to proceed to Fort Canby, Wash. Terr., for temporary duty at that post, relieving Assistant Surgeon W. O. Owen, Jr., U. S. A., who will report in person at these Headquarters for further orders.—*Par. 5, S. O. 62, Headquarters Department of Columbia*, May 12, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIV. SATURDAY, JUNE 7, 1884. No. 23

ORIGINAL ARTICLES.

PRACTICAL SUGGESTIONS UPON THE ALIMENTATION OF PATIENTS SUFFERING FROM DYSPHAGIA.[1]

BY D. BRYSON DELAVAN, M.D.,

SECRETARY OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION; LARYNGOSCOPIC SURGEON TO THE DEMILT DISPENSARY, ETC.

FEW expressions suggest to the mind of the experienced physician so much of extreme suffering as does the word dysphagia. To the patient, already enfeebled by irremediable constitutional disease, and requiring all the help which good nourishment can afford, this symptom comes as an overwhelming blow, which effectually crushes out all hope for life and for comfort which may remain. Again, when safety lies in the successful passage of a dangerous crisis, the want of proper sustentation will often prove disastrous, while, in cases of less apparent danger, the demoralizing effects of severe dysphagia are often most serious. We may well be impressed with the important relations which it bears toward the general well-being of the patient, and the urgent necessity which always exists for its relief.

The object of this paper will be to remind you of the morbid conditions with which dysphagia may be prominently associated; to discuss briefly its direct influence upon these conditions; to suggest for its relief some methods which have heretofore not been fully appreciated and utilized; and, finally, to urge the prompt employment of these methods in all cases in which they are likely to be of service. Dysphagia may be caused by organic, by functional, or by surgical derangement of one or more of the parts concerned in deglutition. Again, these derangements may be either acute or chronic, remediable or irremediable, so that the indications to be met, and the end to be attained, cover a wide and varied field.

The *organic* derangements which most frequently cause dysphagia are: *a*. Tuberculosis; *b*. Cancer; *c*. Syphilis; *d*. Diphtheria; *e*. Tonsillitis; *f*. Parotitis; *g*. Retro-pharyngeal abscess.

The *functional* derangements are: *a*. Spasm of the pharyngeal constrictors; *b*. Paralyses.

The *surgical* conditions are: Operations upon and injuries to—*a*. The soft and hard palate and uvula; *b*. The tonsils; *c*. The pharynx; and, *d*. The larynx.

In all of these conditions, the act of deglutition will produce:

1. Pain, either local or reflex; or,

2. Mechanical or chemical injury to parts already inflamed or ulcerated; or it may cause both.

These, and especially the first, may, not only by interfering with the ingestion of food, but also, by the depressing effect upon the nervous system of frequently recurring shock, result in:

3. Impairment of nutrition.

The general indications to be met would therefore be:

1. The securing of rest, and avoidance of causes which excite pain.

2. Protection of the parts from mechanical or chemical injury.

3. The maintenance of nutrition.

Heretofore, the resources for meeting these indications have been crude, limited, and ineffectual. Thus, in tubercular or cancerous ulceration of the throat, the patient, unable to swallow either solid or liquid food, has been directed to bolt quickly an unbeaten raw egg, or a raw oyster, or some such semi-liquid, and yet coherent bolus as should contain the greatest amount of nutriment in the least possible compass, and in this manner reduce the number of acts of deglutition to a minimum. Meanwhile, in spite of local anodynes and healing applications, pain and injury have been steadily augmented, and, in the unequal struggle for life, the patient never taking at any one time food enough to supply the demands of nature, has surely lost ground. Again, in severe acute affections of the throat, the patient will often decline to take any nourishment whatever, until the severity of the attack shall have subsided, thus adding to the enfeeblement caused by the disease itself, and protracting the period of convalescence.

In the neurotic and surgical affections before referred to, the difficulties and objections to swallowing are evident.

Since the act of deglutition is the immediate cause of dysphagia, the most rational means for relieving the dysphagia would be, obviously, to remove the cause; in other words, to abolish the act of deglutition. This, in fact, is what it is proposed to do, and by the following methods:

I. When there exist both dysphagia and inability on the part of the stomach to retain food, a most invaluable resource lies in rectal alimentation, the utility of which has been so well established that it is only necessary, in the present connection, to call attention to the importance of its adoption early in the history of the case, and before the strength of the patient has been reduced by want of food.

II. When, on the other hand, the condition of the stomach is good, then, granting the desirability of alimentation by the natural passages, the indication is clearly either to remove the obstacle to deglutition or to avoid it. The former is impossible: the latter may, in most instances, be easily accomplished by means of the method which I am about to describe. You will recognize it at once as founded upon old and well-known ideas, and as embracing but few principles with which you are not already familiar; even though you may not have put them into actual practice. The basis of the method is

[1] Read before the New York Academy of Medicine, May 15, 1884.

founded upon the stomach-tube; which, discovered by Renault, in 1802; applied twenty-five years later by Physick, of Philadelphia, as an essential part of the stomach-pump; advocated by Küssmaul, in 1867, as a means for washing the stomach in certain forms of dyspepsia; and, finally, utilized by Débove and Dujardin-Beaumetz in their process of forced alimentation in phthisical and badly nourished patients, has not even yet received the wide application of which it is capable.

Unlike the old practice, however, namely, that of inserting a tube of large diameter through the œsophagus and actually into the stomach, the method herein advocated has as its basis the two following principles:

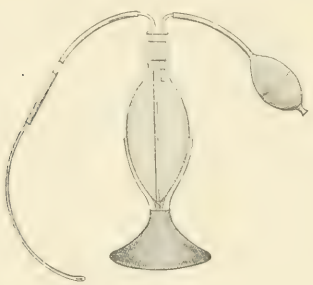
1st. *The employment of a tube of the smallest possible calibre*, and

2d. *The introduction of this tube, not into the stomach, but merely into the œsophagus and past the point of obstruction, or else past the pharyngeal constrictors.*

Through the tube the stomach may be made to receive food in almost any amount and variety, and that without any attempt at deglutition, and with perfect protection to the parts. Hence, it is evident that by that simple device all of the indications mentioned above will be completely met.

1. Pain is at once done away with and a maximum of rest to the pharynx is secured.
2. Injury is avoided, and
3. Nutrition is maintained.

The apparatus needed for this purpose is exceedingly simple. The one which in my hands has been the most convenient, consists of a receiver in the form of an ordinary conical-bottomed soda-water



bottle, into the mouth of which is fixed a tight-fitting India-rubber stopper. In this stopper are two perforations, through each of which passes a glass tube, one short, the other reaching to the bottom of the bottle, so that all of its contents may be exhausted without including any air. To the short tube is attached a Davidson's air-compressor, while the long one is connected with an English flexible woven catheter, of any size from 8 to 18, by means of about a yard of rubber tubing, the continuity of which is interrupted by an inch of glass tube, after the manner of the tube of the ordinary aspirator. A simpler contrivance even than this is the device of Faucher, who, instead of using an air-tight receiver, merely attaches to the end of the tube a glass funnel. An ordinary Davidson's syringe has sometimes been used.

The size of the catheter should be regulated by the age of the patient and the nature of the liquid to be introduced. It is better not to rely upon the lateral opening in the catheter, but to perforate it at its tip, so that the fluid may pass immediately and unobstructedly downward.

As to the liquids which it may be possible thus to employ, their variety is unlimited, while their consistency may be of considerable thickness and body, so that food of almost any desired class, and in any quantity, may be administered. For a full description of the preparations recommended by Débove and Dujardin-Beaumetz, I must refer you to the article upon "Lavage et Gavage," by the latter, or, better still, to the excellent paper upon the subject lately published in the *New York Medical Journal*, by Dr. Henry B. Millard, of this city. In injecting the fluid into the œsophagus it is generally necessary to proceed slowly, allowing, in an adult, not more than half an ounce to pass at once, and stopping for a few seconds before repeating the injection, so that, as far as possible, the natural physiological action may be imitated.

To the great advantage of the catheter over the large and clumsy stomach-tube, it is scarcely necessary to refer, as its introduction is much less startling and uncomfortable to the patient, and if the preparations referred to above be used, the large tube will be unnecessary. As a general rule, the irritation caused by the passage of the tube increases with its size. The tube should be introduced in the usual manner, namely, the patient's mouth being opened and his tongue protruded, the catheter should be carried to the base of the tongue, the patient told to swallow, and, as he does so, the catheter pushed into the œsophagus, and thence downward as far as may be deemed necessary. The larynx may be avoided with certainty by using the finger as a guide. Before its introduction the tube should be carefully lubricated, for which purpose white of egg, mucilage, or even milk, are useful. An excellent plan is to allow the patient to swallow slowly, just before the introduction of the catheter, a drachm or two of pretty thick mucilage. Vaseline, glycerine, and oil are unpleasant to the patient, and should on no account be used. In passing the catheter gentleness should be used, and great care taken to avoid, as far as possible, all points of special tenderness. In many cases the patient may be taught to pass the tube himself much more successfully and comfortably than it can be done for him, since the manœuvre is not a difficult one, and no one knows so well as he the exact situation of the painful spots. Sometimes, especially with children, the point of greatest irritability is in the palatine arches, and any attempt at passing a tube across them will be followed by violent gagging. In such cases a soft rubber tube may be passed through the nostril and pharynx, and thence into the œsophagus, and thus contact with the fauces be wholly avoided. Should the introduction of the tube cause dyspnœa, direct the patient to take full

breaths. It may also cause nausea when it passes the pharynx, for which Dujardin-Beaumetz advises the administration of bromide of potassium; and, also, when it reaches the stomach, in case it be inserted so far, for which the introduction of food will quickly bring relief.

Of course, the passage of the tube will not always prove an easy or a painless operation. A little practice, however, will render it possible in nearly every instance, while the advantages to be gained far outweigh any ordinary objection to the method. No one who recalls to his memory the delicious sensation of repose and satisfaction which has, to him hungry, followed the ingestion of a hearty meal, will fail to appreciate the comfort and relief which the tortured and starving unfortunate will derive from the use of this simple means.

Turning now from the general consideration of the subject, it will be well to study more particularly the special application of the methods just described.

Organic Derangements.—a. Tuberculosis. In no disease does dysphagia play a more important part than in this. Although the resources of modern therapeutics have rendered it possible to control, to some extent, the tuberculous ulcerative processes commonly found in the larynx and pharynx, still no amount of medication can counterbalance the evil effects of the local disturbance caused by deglutition; and, even in cases in which the ulcerations are confined to the interior of the larynx, beyond the reach of matters swallowed, deglutition is apt to provoke attacks of coughing which not only cause the food already taken to be vomited, but inflict additional injury upon the parts. When the ulcerations are external to the larynx, for example, upon the epiglottis, or in the region of the tonsils, the pain is more intense than in any other lesion of the throat. Thus nutrition is almost totally arrested at a time when life is most dependent upon it. In cases in which extensive degeneration has taken place in the lungs, and this condition must soon of itself prove fatal, dysphagia stands in the same relation that it does in cancer: the symptoms can only be palliated, and with little hope of prolonging life. In many instances, however, extensive ulceration of the larynx occurs long before the pulmonary lesion has progressed beyond control. By proper conditions of climate and *nutrition*, life may be prolonged indefinitely, so far as the lungs are concerned. But the dysphagia interferes with nutrition; strength to cope with the disease is not forthcoming; and so, through a cycle of unfavorable influences, the progress of the patient is from bad to worse, until, finally, he succumbs from inanition. It is in such cases that the results of treatment by the tube are most brilliant, for it will readily appear that, with a full and well-assimilated diet, the conditions under which the patient labors are materially altered, and the possibilities of recovery or of improvement infinitely increased.

b. Cancer. The most unpromising circumstances under which dysphagia is likely to occur will be found in some one of the various forms of cancerous disease which may attack the throat. The extreme liability to destructive ulceration in cancer of the mucous membrane renders dysphagia an early and prominent symptom. The pain in such cases increases with great rapidity, until a time comes when the dysphagia surpasses the limit of human endurance, and when the pangs of hunger are less intolerable than is the agony caused by each attempt to satisfy it. The condition of the patient is such that the history of suffering cannot furnish a parallel. No creature can be more miserable, none more hopeless. While it may not be desirable to prolong life under such circumstances, still the performance of tracheotomy when indicated is always regarded as a duty, and with equal justice the patient should be fed, and his pain relieved, even when there is no doubt as to what will be the final result. Here, again, the tube will prove a source of greatest comfort.

c. Syphilis. As in phthisis, so in syphilis nutrition plays an all-important part in the successful treatment of the case. Although the danger to life may not be so great as in phthisis, still in extensive secondary or tertiary disease of the throat it is by no means inconsiderable, while dysphagia is often very severe. The earlier the patient can be placed upon a full supporting diet the more quickly will he be likely to respond to constitutional treatment. The importance, therefore, of overcoming dysphagia and its effects is clear.

d. Diphtheria. In many cases of diphtheria, dysphagia is not a marked symptom. When, however, it exists, the tube should be immediately resorted to, in order that the heart's action may not be influenced by the depressing effects of pain; and, more particularly, because in this disease the question of nutrition is of such vital importance.

e. Tonsillitis. In all acute inflammatory affections of the tonsils, dysphagia is frequently so distressing that the patient will for several days refuse all food whatever. This, of course, adds to the duration and severity of the attack, and, therefore, protracts the period of convalescence. No one familiar with such cases can have failed to observe the beneficial effects of the first hearty meal which the patient is able to swallow. The inference naturally follows that nutrition should be maintained from the outset.

f. In Parotitis and (*g*) *Retro-pharyngeal abscess*, as in tonsillitis, dysphagia is frequently so distressing that the tube will be of great service.

Functional Derangements.—a. Spasm of the pharyngeal constrictors. Although this condition is rare, cases now and then occur in which the hyperæsthesia is so great that the power of swallowing is, for the time being, lost, so that, when it continues for any considerable length of time, the patient may suffer severely for want of food. A few well-assimilated meals would, from their tonic effect, probably contribute more than any other one thing toward the breaking up of the attack, as well as satisfying the immediate demands of hunger.

b. Faucial paralysis from any cause—from cerebral hemorrhage or embolism, or from diphtheria—is always a most important and annoying symptom from the well-known tendency of the food to get into the larynx. In his excellent work upon diphtheria, Prof. Jacobi suggests the value of the stomach-tube in diphtheritic paralysis.

Surgical Conditions.—As to the surgical conditions in which the tube will be of service, it is only necessary to mention them in order to suggest the great utility of the method. In all such cases it will be well to accustom the patient to the use of the tube *before* the operation, so that he will not be obliged to learn it under adverse circumstances.

I have dwelt thus particularly upon the details of the subject in hand, even at the risk of being prolix and elementary, because I believe that by a proper use of the methods described much distress may be done away with, and great good accomplished.

Some, doubtless, will object that the passage of the tube is likely to be disgusting, painful, or unnecessary, and that no sensitive or refined patient would submit to such a proceeding. My own experience, however, covering a period of nearly four years, and embracing a wide variety of subjects, together with the large and rapidly increasing mass of testimony both from home and from abroad, has satisfied me that the passage of the small tube is a comparatively easy matter, and that I am amply warranted in advocating the views herein advanced.

I would urge for the special method described a fair, patient, and intelligent trial in cases suitable for its employment, and am confident that, once having gained the limited amount of manipulative skill necessary for its use, it will be found, in a large proportion of cases at least, an indispensable resource, and an instrument most useful in the relief of suffering and in the prolongation of human life.

No. 1 East 33D St., New York

OSTEOTOMY FOR ANKYLOSIS AT THE HIP-JOINT.[1]

By CHARLES T. POORE, M.D.,
OF NEW YORK.

DEFORMITIES at the hip-joint, which may be relieved by an osteotomy, may be considered under four heads:

1. After hip-joint disease.
2. After rheumatism.
3. After unreduced dislocation.
4. After fracture united at an angle.

The great majority of deformities of this joint follow coxalgia. There are but few persons who have had suppurative disease of this articulation who recover with motion, and many, in whom there have been no signs of abscess, yet the joint remains stiff with an amount of flexion and adduction which interferes much with locomotion; or there may be some movement at the hip-joint; yet, on account of the contraction of the psoas and iliacus, and the adductors, the limb is flexed and adducted on the pelvis at an angle too great for easy locomotion; the foot cannot be planted firmly on the ground even with the greatest latitude of motion in the lumbar vertebræ, the gait being awkward and labored.

An ankylosed hip-joint in which the limb is held in a straight line with the bony axis of the body is a useful one for walking or standing, but it is more of a deformity in any other position of the body than one fixed at a right angle to the pelvis. In the former case the person cannot sit down with any degree of comfort or put on his shoes, whereas in the latter not only is the sitting posture comfortable, but, by the aid of proper orthopædic apparatus, locomotion can be performed with considerable facility. It therefore becomes an important question to solve at what angle an ankylosed hip should be placed so as to be a compromise, as it were, between these two positions, and give the patient the greatest amount of use—that is, easy walking and comfort in the sitting posture. I think that an angle of 125° with the long axis of the body gives this. This, then, taken as a standard, we are in a position to discuss the question of correcting any marked deviation on either side of this line.

The deformity after hip-joint disease is due, 1st, to contraction of the psoas and iliacus, causing flexion and rotation of the limb; 2d, to the action of the adductors drawing the limb toward the median line. This adduction is accompanied by tilting of the pelvis upwards upon the diseased side in walking in order to bring the limb in a line with the long axis of the body and prevent it crossing the sound one. It is a compensatory, not a pathological, position. In the early stage of the disease the apparent shortening is due to this tilting of the pelvis; later, in those cases in which changes take place in the head and acetabulum, there is actual shortening of the limb.

The difficulty in walking is not due so much to the shortening and flexion of the limb as to the adduction, whether the limb be ankylosed or not. The characteristic awkward gait of a patient who has recovered from coxalgia with ankylosis or limited motion is due to the hitching up of the pelvis on the diseased side at every step in order to get the limb out of the way of the sound one; in order to accomplish this the pelvis has to be raised so much in many cases that only the toes are able to touch the ground—even when the real shortening is slight.

As mentioned before, the muscles at fault are the psoas and iliacus, and the adductors, and even when it is attempted to correct the deformity by any operation above the insertion of the former, they will still prove an obstacle, and in many cases prevent the limb from being brought into a desirable position.

In those cases in which ankylosis does not take place, there may be motion in the direction of further flexion, but extension beyond a certain point is impossible, and although the thigh can be brought down so that the foot can be planted flat on the ground, it is not from any further extension, but is accomplished by bending forwards the lumbar portion of the spine and tilting downwards of the pelvis, due to shortening of the muscles inserted in the trochanter minor. In this class of cases walking is almost as difficult as when the joint is fixed in the same position when there is much adduction.

Absorption, more or less, of the head and neck of the femur and the higher plane occupied by the trochanter, due partly to the above-mentioned changes and partly to elongation of the acetabulum in its upper and posterior portion, increase in no small degree the deformity and the actual shortening of the limb.

[1] [illegible] N. Y. Surgical Society, May 27, 1884.

In ankylosis following rheumatic inflammation, the condition of the parts is entirely different. The bone is not infiltrated with inflammatory products of low vitality; it may be increased in hardness, but the parts retain their normal relation. The neck is not shortened, the ankylosis is usually bony, and the psoas and iliacus are not as much of an element in causing the deformity; it is due more to position, while in hip-joint disease it is the active contraction of these muscles that causes the flexion, etc. In this disease the limb may be fixed in a straight line with the long axis of the body, a condition seldom, if ever, met with after coxalgia.

In rheumatoid arthritis the joint may be surrounded by irregular bony growths, and the head and neck be very hard.

Deformities may occur after unreduced dislocation, the dislocation may be traumatic or pathological. The latter may occur during the course of hip disease, but I do not think it is as common as some writers would lead us to suppose. It may occur during the course of some debilitating disease as typhoid fever, scarlet fever, or acute rheumatism.

Malposition of the femur after fracture, high up, has been reported.

In forming an opinion in regard to the advisability in a case of performing an osteotomy for the relief of any deformity at the hip-joint, the amount of adduction should be considered more than the flexion. I think that we are apt to look more at the latter, while the former is the main hinderance to easy locomotion. I think that a moderately flexed limb, with much adduction, is more of a real deformity than one flexed at a much greater degree without adduction. In the former case the real shortening (I mean by that, the distance that the tilting upwards of the pelvis raises the foot from the ground in walking) is often more than double the real difference in length of the two limbs measured from the anterior superior spine. The object of performing an osteotomy here is, first, to correct any adduction of the limb that may exist; and, secondly, to reduce the amount of flexion to an angle of about 125°.

There are three points at which section has been made for the correction of deformities at the hip-joint, namely, through the neck, between the trochanters, and below the trochanter minor. The section through the neck, known as Adams's operation, can only be performed when the neck is present. It is, therefore, only applicable in cases of bony ankylosis following rheumatism; and it has been advocated in those cases of recovery from hip-joint disease, with bony ankylosis, in which there has been but slight destruction of the head. But it is a serious question whether cases of deformity after suppurative coxalgia should ever be submitted to this operation. In the vast majority of cases, the section would be made through bone infiltrated with inflammatory products of low vitality. The incision to gain access to the neck would frequently have to be made through tissues that had been the seat of abscess, and, even if this succeeded, after section it would be difficult to bring the limb down into a desirable position. It is not applicable to cases in which the psoas and iliacus are much shortened, and this condition is found after coxalgia more frequently than after any other disease. Again, the muscles inserted into the trochanter minor being still attached to the lower fragment, must tend to draw the limb inwards.

In regard to operations between the trochanters, the section is made further from the seat of disease in cases of deformity following suppurative coxalgia. It also permits of the removal of a wedge-shaped piece of bone, which is so desirable in cases of marked adduction; yet the point of division is above the insertion of the psoas and iliacus, and the same objections hold good as to Adams's operation. If the object is to obtain motion in addition to the correction of the deformity, there is no question that the nearer the division is made to the true axis of motion the better; but useful motion is seldom attained, no matter where the section is made, nor the method of making it.

Section below the trochanter, I think, will prove the best operation in the vast majority of cases in that it is below the insertion of the muscles attached to the trochanter minor; it is further away from the seat of disease in deformities following coxalgia; there is less danger of displacement inwards of the lower fragment. I think that the advantage of making the section below the smaller trochanter is not clearly understood. I have lately had the opportunity to examine the parts removed from two cases following an osteotomy for deformity at the hip-joint. In one case, the femur was divided between the trochanters; in the other, the line of section was oblique, from without inwards and downwards, so as to pass through the middle of the trochanter minor. In the first case, recovery had taken place with marked adduction; in the second there is a displacement inwards of the lower fragment that may be attributed, in part, I think, to the action of the psoas and iliacus, whose attachment had not been entirely freed. After section, extension was applied to the limb, by which the lower portion was brought down. The muscles inserted into the trochanter minor draw the upper portion of the lower fragment inwards, and cause a projection in this location.

In the first case the adduction may have been due to the same cause, although the adductors must have had considerable influence in drawing the limb towards the median line. In regard to the removal of a V-shaped piece of bone, as advocated by Volkmann, from between the trochanters when there is marked adduction, I do not think that it has any advantage over a simple linear osteotomy. It is true that if the size of the wedge has been accurately calculated, in connecting, the two sides of this V-shaped gap will come into apposition, while after a linear section there will be a gap left on the inner aspect of the bone, which will have to be filled up with new bone. Theoretically a cuneiform osteotomy is more liable to be followed by suppuration, but practically, if the wound is properly cared for, this accident should not happen. There is, however, greater danger of a piece of cellular or other tissue being caught between the fragments, after a cuneiform than after a linear section, and causing suppuration; and the former takes more time to perform. I am, therefore,

of the opinion that a linear section is much the better. The more simple an operation is, the better will be its results.

All efforts to obtain useful motion at the point of section have ultimately failed. In a few cases a movable articulation has been obtained, but in time all motion has been lost. In one case (Burton's), it lasted six years; and in another (Sands's), there was limited motion for two years. In other cases it has only lasted for a few months, notwithstanding persistent efforts to prevent consolidation. It would seem that the difficulties attending the formation of a false joint are great, and even if one is obtained, it is a question whether it is of any real advantage to the patient. I think that a stiff limb in a good position will afford the patient more security and easier locomotion than the best false joint in this situation, and that a false point of motion is more of a hinderance than an aid to walking.

The method of performing an osteotomy at the upper end of the femur does not differ from sections of bone in other localities. I see no advantage in a cuneiform section over a linear osteotomy, and I think that a division of the femur below the trochanter minor is a better operation, and will yield better results in the vast majority of cases than one above this point. The method I have adopted is to make an incision about one inch long down upon the outer aspect of the shaft of the femur, at a point just below the trochanter minor; then, upon the knife as a guide, pass an osteotome down, and divide the bone at *right angles* to its long axis. After the bone has been nearly divided, the osteotome is withdrawn, and the section completed by fracturing the remaining portion. Some surgeons divide the tendons of the adductors and long head of the biceps and a portion of the tensor vaginæ femoris, and twist the bone in various directions, in order to break down any adhesions that may exist and stretch the muscles holding the femur in its abnormal position. Unless the deformity is very marked, I do not think a tenotomy is called for, and I have abandoned all twisting and manipulation of the shaft. After placing a narrow strip of adhesive plaster over the wound, so as to bring its lips into close apposition, but leaving a space on either side of the plaster uncovered, so that any undue accumulation of blood can escape, the parts are dusted over with iodoform, and a small compress placed over the wound and held in position by another piece of adhesive plaster. A bandage is then lightly applied, and a long splint, extending from the axilla to just above the external malleolus, no attempt being made to correct the abduction or flexion. An extension, with six or eight pounds weight, is applied after the patient has been put into bed. It will generally be found that upon the third day the wound has closed, when the extension is run up to ten or fifteen pounds, according to the age of the patient. This amount of extension will bring the limb down; and in all the cases that I have tried, it lowered the pelvis of that side, so that the limb is slightly abducted.

After an osteotomy in this locality, the patient should not be allowed to sit up in bed, but should be kept as flat as possible on his back, until firm union between the fragments has been established. A plaster-of-Paris splint is not a good dressing after this operation; it does not fix the pelvis well, it soon becomes loose and admits of motion; it does not permit of the use of an extending apparatus, and there is no opportunity to correct any malposition.

The great leverage exerted by the limb below the point of division, and the narrow space above this point over which the bandage can be applied, make it impossible to obtain fixation and control over the lower fragment, so that much of the good position gained in the operating-room is lost from the ability of the patient to flex and adduct the limb to a certain extent. A plaster-of-Paris splint is a good dressing when the limb can be encased some distance above and below the point of fracture; but when the splint only passes a short distance above this point, deformity will occur. The same holds true, but with much greater force, after an osteotomy in the upper part of the femur to correct a deformity in which there is muscular resistance continually to be overcome.

From a careful examination of the two specimens (Drs. Wharton's and Moore's), it is evident that the section has not been made at right angles to the long axis of the limb, although both operators supposed that the section was made transverse. This was due, I think, to the fact that the limbs were adducted, and the bone was divided at right angles to the body rather than at right angles to the femur. I am satisfied that I have made this mistake, and I think it a point one is apt to overlook, not taking sufficient account of the amount of adduction.

From the form of the femur at its upper portion, where osteotomies are usually performed, its lateral diameter being greater than its antero-posterior, there must, in all cases in which there is any rotation inwards of the limb, after correction, be a projection outwards of the inner portion of the lower fragment, because a wider portion of the femur is brought into apposition with a narrower.

The accidents following an osteotomy at the upper end of the femur are few—out of 148 cases, 119 were cured with the limb in a good position, 17 died, and there were 12 failures, making a mortality of 11.48 per cent. In thirty-three cases suppuration is reported, and in only three is any necrosis mentioned. In three patients an Adams's operation did not correct, or the deformity returned, and a section below the trochanter minor was performed with success.

In one case (Post), compression of the femoral vessels, from tilting upwards of the upper fragment, after a section below the trochanter, occurred, and in one severe hemorrhage came on on the twentieth day after a section through the neck (Servias), from either the femoral or one of its large branches, necessitating a ligation of the femoral. The patient recovered.

Maisonneuve is reported to have divided the sciatic nerve during an operation of section between the trochanters through a large wound.

The percentage of fatal cases mentioned above gives a higher rate of mortality than belongs to the

operation as now performed. Many of the operations were performed before experience had demonstrated what class of cases were proper ones for section. In some cases the section was made too high, or the patients were subjected to an operation at too early a date after the disease causing the deformity had subsided. Many of the operations were performed through large wounds, and extensive dissections were made to reach the bone. It is also found that twelve of the fatal cases occurred prior to 1877, and only five after that date, the number of cases being nearly the same in the two periods. Lately, Dr. E. M. Moore, of Rochester, has published a case in which he had performed an osteotomy between the trochanter for dislocation of the head of the bone. It was at first displaced on to the dorsum of the ilium, but by manipulation had been thrown above the superior lip of the acetabulum, the trochanter being turned backward. Section was made between the trochanters, and, after bringing the foot into its normal position, an extending weight of fifteen pounds was applied. The result was that the shortening, which before the operation had been two and a half inches, was reduced to one, new bone being deposited between the fragments one and a half inch in length. In one case I have tried to obtain a lengthening, and have succeeded.

MEDICAL PROGRESS.

SIR HENRY THOMPSON'S RECENT IMPROVEMENT IN THE ASPIRATOR FOR LITHOTRITY.—Last autumn SIR HENRY THOMPSON made an addition to his aspirator, which appears to be useful. It consist in a light, loosely hanging valve of fine wire, attached by a simple hinge to the end of the evacuating-tube, which terminates within the glass trap of the instrument. When pressure is made on the India-rubber globe, and the current flows by the evacuating-catheter into the bladder, this light valve is driven close to the aperture, and no débris can leave the glass trap. When the pressure is removed, and the current returns from the bladder, the valve floats widely open, and permits the débris to enter unchecked. The wire-valve is circular in form, and its border being flat and thin, and about the tenth of an inch wide, is delicately sensitive to the movements of the current, and responds to the slightest impulse of the hand on the India-rubber globe. But he is quite satisfied that with his last published aspirator, as well as with the form now described, no débris returns to the bladder if the instrument is properly used, when, of course, the valve is unnecessary. Few persons are aware that very slight but quickly made pressure on the globe, sufficing to transmit only six or eight drachms of fluid into the bladder, generally removes more débris than a powerful impulse which transmits at one act all the fluid contents of the globe, or nearly so. When employed in the manner last-named, the valve becomes useful, and only then is it required.

As to the present instrument itself, the form is simple; not far removed from the original pattern of Clover, but with the useful addition of a funnel and stopcock at the upper part of the globe, to facilitate the act of filling with water, as well as the escape of air. Moreover, the glass trap is easily disengaged from the globe, by which means the valve, which is sometimes liable to be partially blocked, as when much mucus and fine débris are present, can be easily cleaned. At the same time, this blocking of the wire grating of the valve in no way interferes with its competency in action. It is necessary that the end of the evacuating-tube within the glass trap should have the angular form represented, so that the lower end of the valve, when undisturbed by the current, should not close the orifice, but hang at a considerable distance therefrom.—*Lancet*, April 12, 1884.

LAPAROTOMY FOR INTERNAL STRANGULATION; RESECTION OF THE INTESTINE.—DR. D. MORISANI reports two cases of laparotomy for internal strangulation. One presented no particularly interesting features, but in the second case such extensive inflammation and adhesions were found that it was absolutely necessary to resect about three inches of intestine. The operation was performed by Gussenbauer's method, with the double Lembert suture. The patient died of shock.—*Rivista Internaz. di med. e Chir.*, March, 1884.

SYSTOLIC MURMUR AT THE APEX IN A CASE OF AORTIC LESION.—One of the elements of a cardiac murmur to which great importance is given is its seat of maximum intensity. When this is at the base of the heart, an aortic or a pulmonary lesion is diagnosticated; when at the apex, a mitral lesion; and between the apex and the epigastrium, a tricuspid lesion. All clinicians know that the seat of maximum intensity of the diastolic murmur of aortic insufficiency is sometimes heard below, along the left border of the sternum, and toward the xiphoid cartilage; but, so far, a systolic murmur heard only at the apex, and due to an aortic lesion, has never been reported.

The following case, reported by DR. WEILL, of Lyons, also seen by Prof. Lepine and several of the hospital physicians, is very interesting. P. P., æt. 47, entered the hospital on December 2, 1883, and died on the 27th. His health had been excellent until four years ago, when he had acute articular rheumatism. The trouble of which he died began five months before his entrance, with insomnia, oppression and palpitation, and œdema of the lower limbs. The apex beat was in the sixth interspace, outside of the nipple. The shock was perceived with difficulty. The beats were regular, and there was no fremitus. Auscultation showed a rude systolic murmur at the apex, short and blowing. It was audible over the sternum and base, and was propagated toward the axilla. It did not encroach upon the diastole or the presystole. There was no carotid murmur; the radial pulse was regular and sufficiently strong. The patient did not complain of precordial pain, and no sensitive spot could be found in the intercostal spaces. The area of cardiac dulness was not increased. There were a few pulmonary râles; the liver was enlarged; the urine albuminous; and the limbs showed a few purpuric spots.

At the autopsy, the examination of the mitral orifice and valves showed that they were absolutely sound. The left auriculo-ventricular orifice was not dilated, and the ventricular cavities, although enlarged, did not have a greater mean diameter than two inches. The aortic

orifice was sound, and about two and a half inches in circumference. The sigmoid valves presented, on their internal surface, near their free border, small fibrous nodules, arranged perpendicular to the axis of the vessels, having a length of from four-tenths to six-tenths of an inch, and a projection of from one-eighth to one-sixth of an inch.—*Revue de Médecine*, March, 1884.

PEPSIN AND THE PEPTONES IN THE TREATMENT OF DIABETES.—PROF. D. GIOVANNI (*Gazz. Med. Ital. Prov. Venete*, January 12, 1884) draws attention to the frequent utility of pepsin and peptones in the treatment of diabetes. He cites the following case. A young man, aged twenty, was admitted, and gradually submitted to an exclusively meat diet and lactic acid. Even when all milk, starchy, and saccharine matter were entirely omitted, the urine was as abundant as before, and the quantity of sugar the same, and the patient did not become stronger. The thought occurred to Dr. Giovanni that all the meat and eggs taken were not utilized in the organism. The bodily strength was not in proportion to the force of the foods, neither was the quantity of urea in the urine. The examination of the feces showed a large quantity of meat, unaltered and scarcely masticated. The patient was then placed on ordinary diet, but with a certain quantity of pepsin and peptones, prepared according to the method of Prof. Lussana. (The stomach of a calf is cut in pieces, and placed in a quart of dry white wine; after eight days filtered; the filtrate contains pepsin and peptones.) The patient quickly began to improve in general nutrition, and was able to get up; the quantity of sugar and of urine was lessened. On returning to the meat-diet the patient again became worse, and was again better on the substitution of the mixed diet, with pepsin and peptones. Continuing this diet, he so far recovered as to be able to leave the hospital, and a year afterwards, though diabetic still, was in fair health. Professor Giovanni has found equal benefit in other cases from the same treatment, but not in all. He concludes that pepsin and the peptones (Lussana) constitute an element useful in completing the diet of the diabetic, when defective gastric function helps to exaggerate the effects of the disease on the general health.—*London Medical Record*, March, 1884.

WASHING OUT THE STOMACH.—DR. A. BIANCHI, in a paper read before the Academia Medico-Fisica of Florence, reports that he has had excellent results, both palliative and curative, in the treatment of cases of cancer of the stomach, chronic gastric catarrh, chronic gastritis, gastric ulcer, gastric catarrh with chronic hepatitis, digestive disturbances from slight gastritis, and dilatation of the stomach, with slight catarrh and insomnia, by means of the Débove method.—*Gazz. degli Ospitali*, March 26, 1884.

THE TREATMENT OF PERINEAL INJURIES OF THE URETHRA.—DR. C. KAUFMAN, after a general consideration of this subject, draws the following conclusions:

1. In all cases in which catheterization is difficult, or not very practicable, the perineum should be incised, cleaned out, and disinfected. In small, transverse wounds, spontaneous union should be attempted; in complete rupture of the urethra, sutures should be employed, so as exactly to approximate the edges. The catheter should only be used during the first few days, and should never be left in the urethra.

2. Treatment with the permanent catheter should be entirely abandoned. Whenever a sign of inflammation appears, the perineum should be incised.

3. Cystotomy, as a method of treatment, should be given up, and only be used in cases of retention.—*Centralbl. gesammt. Therap.*, March, 1884.

A NEW SPONGE.—MR. SAMPSON GAMGEE, after a number of experiments with a variety of materials, with a view to preparing a sponge combining absorbing power and elasticity, and cheap enough to be burned after use, has found that a ball of curled cocoanut fibres, enclosed in absorbent gauze, sinks in water. That established, he made other balls with absorbent cotton in the centre of the cocoanut, absorbent cotton round it, and then the gauze envelope, the idea being to take up the fluid rapidly, and transmit it, through the springy cocoanut fibre, to the absorbent-cotton centre. He found that a ball so made takes up most readily from sixteen to eighteen times its own weight of blood or water, which, when squeezed out, still leaves the ball elastic and absorbent, readily filling and swelling out again, when dipped in liquid and squeezed, a number of times in succession. Having secured a good combination of fibres, it became a question how to render them perfectly and permanently antiseptic. Mr. Gamgee thought that within the absorbent-cotton nucleus of the sponge might be enclosed a very thin ball or capsule; containing the antiseptic, of any kind, and, within certain limits, in any quantity desired; the antiseptic to be set free by cracking the capsule with a squeeze, just before using the sponge. The idea proves perfectly practicable, and Messrs. Burroughs, Wellcome & Co., the manufacturing chemists, have undertaken to carry it out. A small capsule, containing eucalyptus, or other antiseptic, is inclosed in absorbent cotton, outside this is a layer of cocoanut fibre, and outside this more absorbent cotton-wool, the whole being inclosed in gauze. When about to be used, the capsule can be broken by a blow of the fist, and the absorbent cotton then becomes permeated with the antiseptic. The sponges can be manufactured at a very trifling cost—about a shilling a dozen—and being so cheap they can be destroyed after being used. Some little time must elapse before all the details can be perfected, but sufficient evidence has so far been obtained to warrant the belief that the principle of this sponge may be adapted to the fulfilment of many requirements, as an absorbent and antiseptic sponge, pad, or dressing, in civil or military surgery, in medical and in obstetric practice.—*Brit. Med. Journ.*, April 26, and *Lancet*, May 3, 1884.

RUPTURE OF THE RIGHT COMMON ILIAC AND OF THE INFERIOR VENA CAVA.—M. CERNÉ reports the case of a woman who was run over by a vehicle. One of the wheels passed over the abdomen, and she expired in a few minutes. Post-mortem examination showed a rupture of the right common iliac artery at its origin, and of the inferior vena cava. The artery was very atheromatous.—*Journ. de Méd. de Paris*, March 29, 1884.

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SATURDAY, JUNE 7, 1884.

IDIOPATHIC PERITONITIS.

THE latest candidate for a place among the infectious diseases, with a microparasite for its cause, is idiopathic suppurative peritonitis. In a recent paper in the *Deutsche med. Wochenschrift*, for April 24, E. LEYDEN, after collating a large number of facts from German, French, English, and American literature to prove the existence of idiopathic peritonitis, which has sometimes been questioned—asserts also its parasitic origin. He also reports three cases from his own experience, of which two died and one recovered; but he does not claim to have discovered a distinct parasite, with definite anatomical characters, as he has noted several apparently distinct forms. Idiopathic suppurative pleurisy, he believes, has a similar origin.

In the freshly removed purulent exudate of malignant puerperal peritonitis he also found numerous cocci of invariably the same shape and color; and as the puerperal cases were throughout their entire course more malignant and accompanied by more profound general symptoms, so the micrococci were found to be much more intensely active, infiltrating the muscular substance of the diaphragm, and extending even to its pleural surface, where, too, they had excited inflammation. All of these purulent peritoneal exudates were odorless, and could not be regarded as septic, while the general symptoms to which they gave rise could not be regarded as those of septicæmia. The putrid exudates, of which Leyden also investigated several, distinguished themselves essentially from the simple in that no pure cultures of the microparasite could be obtained from them, but mixed forms, in which especially occurred, along with diplococci bacilli, which partly arranged themselves in long threads and chains. The same was true of putrid pleural exudates.

From such cases, Leyden also eliminates rheumatic peritonitis, including certain instances of acute peritonitis accompanying acute articular rheumatism, in which the exudate is not purulent, but serous.

These causative agents of idiopathic peritonitis enter the system as in other infectious diseases. Such causes as indigestion, constipation, and injury may furnish the conditions favorable to the germs of the disease establishing themselves in the peritoneum. In the female, menstruation especially may coöperate with such causes. During this condition there is a breach of continuity in the uterine mucous membrane attended with a prolonged hemorrhage, so that circumstances favorable to the fixation of the parasite are presented. A further favorable condition is the communication between the uterus, through the Fallopian tube, and the abdominal cavity.

In the matter of treatment of idiopathic peritonitis, Leyden suggests a measure which, although undoubtedly not novel, has nevertheless been so seldom practised, that notwithstanding its apparently unpromising character, it may reasonably claim further consideration from physicians and surgeons, especially in the light of the recent enlargement of the field of abdominal surgery. It is that of evacuation of the purulent contents of the abdomen by paracentesis. He supports this suggestion by his experience with a case in which a splenic abscess, bursting into the abdominal cavity, produced a fatal peritonitis, which, he thinks, might have been averted had the abscess been evacuated. This may be true, but we scarcely think a conclusion as to the treatment of idiopathic peritonitis dare be drawn from such a case any more than from the effects of rupture of an abscess of the liver. Neither case is one of idiopathic inflammation, and death probably resulted from collapse before any inflammatory action could be excited. Again, the accumulation of pus in peritonitis is never so large as in pleurisy, and the consequent difficulty in making an accurate diagnosis, as well as the danger of wounding the subjacent distended bowel, make it unlikely that the operation of tapping the abdomen can ever be rendered available in practice. A much better treatment would be laparotomy, irrigation with sublimate solutions, and drainage.

PULSATION OF THE LIVER AND TRICUSPID REGURGITATION.

THAT the true pulsating liver is the result of regurgitation of blood from the right ventricle into the corresponding auricle and thence into the descending cava, is as generally conceded as that pulsation of the jugulars is due to the same cause. But few

pause to consider the mechanism of this sign. That the blood thus regurgitated should produce a pulsation in the valveless jugulars, which come off close to the auricle, is not so remarkable, but that an organ so distant as the liver should receive an expansile impulse from the same cause is less plain. DR. WALTER SMITH discusses this subject in the report of a case in the *Dublin Journal* for January.

One other cause for the sign has been suggested, and that is a direct shock communicated from the heart coincidently with the impulse. But the liver pulsation continues after the ventricles have ceased to contract, while when the condition of the patient improves the pulsation becomes less; whereas if due to direct shock the contrary should be the case, because the steadier and more forcible action of the heart would increase the pulsation.

In a word, it may be said that the effect of the regurgitant wave, which, of course, exerts itself to a certain degree throughout the entire circulation, is more easily rendered appreciable in the liver on account of anatomical peculiarities rendered necessary in order to secure a proper movement of the blood through the portal vein. It is apparent that there is very little *vis a tergo* to this blood, which is largely collected from the gastric and intestinal capillaries. Hence there would be little or nothing gained by furnishing its trunk or its branches with the elastic coat which forms so important a part of the structure of the arteries; for the power of this depends upon a *vis a tergo*, which is necessary to secure the elastic recoil. At the same time, the vena portæ has to perform the duties of an artery, and some additional means of propelling the blood must be secured.

This is effected by favoring the operation of the force of respiration — a generally admitted, though feebly acting factor — upon the movement of the blood throughout the veins. In the act of inspiration the entire cubic capacity of the thorax is increased, and all the hollow organs contained in it, of which the heart is one, tend to fill up with the fluid accesssible to them. Now, the operation of this agency upon the liver is favored by the fact that the trunks of the hepatic veins almost pierce the tendon of the diaphragm to join the inferior vena cava; these veins cannot collapse when subjected to atmospheric pressure, *i. e.*, to the aspiratory action of the mediastinum, or the suction power of the heart, because they are tunnelled out in the substance of the liver—are, in fact, comparatively rigid tubes, unsurrounded by loose connective tissue. In inspiration, by the contraction and descent of the diaphragm, the caval orifice of the hepatic vein is stretched, the vena cava itself straightened, and the course and openings of the hepatic veins made more direct. During the act of expiration, on the other hand, all these conditions are reversed, and at the very time the intra-thoracic space is lessening and the blood has a tendency to regurgitate into the hepatic veins, this tendency is counteracted.

Now, if regurgitation of blood from the right heart takes place, this very condition of patulous sinuses, approximating rigid tubes, favors the communication to the liver of any pulsation caused by reflux into the inferior cava and larger hepatic veins. But before hepatic pulsation can occur, the impulse must be strong enough to overcome the suction power of the heart in inspiration, the resistance of the parenchyma of the liver, and the elasticity of the liver's capsule, as well as the conditions named as tending to prevent regurgitation during ordinary expiration. Hence, inflammatory thickening of the capsule, by which its elasticity is destroyed, tends to prevent hepatic pulsation. The elasticity of the capsule is a further conserving force in preventing undue compression of the substance of the liver between the blood in the over-distended hepatic vessels and the capsule itself.

ANTE-NATAL INFLUENCES.

THERE is hardly any subject of greater interest, and in regard to which so little is known, as that of ante-natal influence, whether at the time of conception, or in the subsequent development of the new being. Speculations are many; dreams and dreamers, fictions and fancies are numerous, but our real knowledge is very little more than that which was possessed many centuries ago. Diogenes said to the stupid youth: "Your father was very drunk when you were conceived." Vulcan's deformity was the proof of Jupiter's drunkenness when he was begotten. Modern science has shown that if a fruitful coition occurs when either of the parties is drunk, the child usually has some physical, intellectual, or moral defect—epileptics and imbeciles may thus be created. This is about the limit of our certain knowledge.

But with this fact proved, it is in the highest degree probable that less pronounced, less easily discovered and appreciable intellectual and physical conditions of the creators at the time of creation may, and do impress themselves upon the offspring. The swift and subtle power by which the sunlight clearly and indelibly reproduces on dead matter the exact image of form, features, and expression, may be but the type of the impressing the intellectual, moral, and physical character upon living matter at the time of the creation of a new being, and the qualities and characters that are shown in the months and years that follow are but the working out of those first forces in organization.

Considering the fact that most children are accidents, we have no reason for surprise at examples of physical deformity or imperfection, mental deficiencies, or moral obliquities, but rather that the average is so good. When human beings invest the possi-

bilities of reproduction with its true and vast responsibilities, with its far-reaching consequences, there will be a great improvement in offspring. Man or woman prepares for the photographer by a careful toilet, strives to go unfatigued, and with a face undarkened by sorrow or anxiety—in a word, is desirous, if not from personal vanity, at least with the wish to please others, of appearing at his or her best in the counterfeit presentment which is made. Ought not much more care to be exercised by parents in the possible reproduction of themselves, of themselves as they are at that special time? A child is the incarnation of the qualities, good or bad, of the parents, and possibly it may be the incarnation of transitory states, temporary impulses, feelings, or thoughts—noble or base, cheerful or sad, healthy or morbid—of those parents. A few minutes may determine whether these living images shall be happy, helpful, useful members of society, and a blessing to their homes, or born to a heritage of disordered, diseased nature, darkening their own lives and those of others, until death is a blessed relief.

As to subsequent influences exerted through the pregnant woman's mind upon her unborn child, we are in the region of fable and conjecture; most extraordinary stories have been told of the effects of some horrible sight which suddenly startles the mother, and, through her, affects the fœtus. Van Swieten states that he saw a young lady who had upon her neck the exact representation of a caterpillar, as "closely resembling it as two eggs resemble," and the cause was that the mother when pregnant was frightened by finding a caterpillar upon her neck. Quite in contrast is the alleged influence of a continuous impression. Haller, a man not less remarkable for his learning than for his truthfulness—at least he never made a statement that he did not believe—assures us that an Ethiopian woman had several white children, and the explanation was that she had in her house a white marble statue. The physician to-day would give a more plausible cause of such color anomalies. A recent writer has attributed the kleptomania of a wealthy lady to the fact that when pregnant her mother was denied the "cravings for a variety of things" by the stinginess of her husband. Again, a child has been born with harelip whose mother attributes the deformity to her having seen when two or three months pregnant, or later, a child or adult with similar deformity; the physician knows that such arrest of development must have occurred before the earlier of those periods. It is, in part, because of such extravagant and unreasonable stories that the great mass of physicians reject the theory of mental impressions made upon the mother in pregnancy affecting the fœtus. Another reason for this general rejection is our inability to explain how such impressions can act upon the fœtus. But it would be more scientific to find out whether they do, and afterward seek the mode; before deciding the impossibility of a fact occurring, let us first look for the facts, and then seek their explanation. Here is an important field for inquiry, for the collection of well-authenticated facts; after this collection we may determine their meaning, make their interpretation. That the fœtus may be affected by impressions made upon the mother's mind, has long been and still is commonly believed. A popular belief so widespread and so long-lasting indicates in these very conditions the probability of its containing some element of truth.

We have been led to these reflections by reading the report of a lecture recently given by M. LEGRAND DU SAULLE, at Salpêtrière, in which he refers to the "infants of the Siege." He states that the numerous disorders of development and the exceptional mortality observed in children born in the latter months of 1871, caused them to be known among the laboring population as *enfants du Siège*. Inquiry proved that of 92 children conceived during the siege, 64 had physical, intellectual, or affective anomalies, and 28 others were small and sickly; 21 of the 64 suffered as to the intellect—dull, imbeciles, or idiots. M. Legrand du Saulle, regards "the pathogeny as complex, its chief elements being alcoholism, inanition, and the psychical state determined by the moral shock in circumstances especially dramatic."

IN another column we are told of the substantial recognition by Germany of the great service done to medicine and to humanity by the illustrious Koch in his recent discoveries, and by Frerichs in his contributions to the advancement of medical science. This week the Philadelphia profession has testified its grateful appreciation of the life and work of one of the noblest and most distinguished of American physicians, Dr. Alfred Stillé.

This spontaneous and hearty recognition of the great service Dr. Stillé has rendered to medicine in his many years of active labor is at once just to him and honorable to the profession. It does immediate good, enlarging the hearts of participants, and raising men into a purer atmosphere than that which is found in the strifes and struggles of daily life. It does remote good, for it invites young, ambitious men to walk in the footsteps of him thus honored, to live his pure, industrious, and useful life, and it assures them that they will find in such living its highest reward, and that professional recognition of the best will not fail.

It is given to but few men to be discoverers in any department of medicine; but industry, fidelity, high and noble purpose, and philanthropic work are in the power of many, and all who use their power wisely will surely find their reward.

SOCIETY PROCEEDINGS.

THE ILLINOIS STATE MEDICAL SOCIETY.

Thirty-fourth Annual Meeting, held at Chicago, May 20, 21, and 22, 1884.

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, MAY 20TH—FIRST DAY.

THE Society was called to order, at 10 o'clock, by THE PRESIDENT, EDMUND ANDREWS, M.D. He then introduced DR. EPHRAIM INGALS, who, on behalf of the Committee of Arrangements, made a brief address of welcome.

THE PRESIDENT, DR. EDMUND ANDREWS, then delivered

THE ANNUAL ADDRESS.

There is much talk, at present, he said, upon the Ethical Codes of the American Medical Profession. It is necessary to go slowly. It is necessary to recognize, as governing the profession, a code of ethics and a code of etiquette. The laws of ethics or morals are unalterable, eternal, natural laws, and back of them stand God; they were not created by the American Medical Profession—as many believe. Ethical laws, written or unwritten, demand of the physician the greatest possible knowledge of disease, its application for the benefit of his patients, kindness, courtesy and geniality to those under his care and to his professional brethren. Laws of etiquette require adherence to certain, well-recognized conventional forms—which are of importance, but are artificial and always subordinate to the demands of ethics.

A few years ago, doctors galloping along in the country were like so many brutal centaurs, cantering over corduroy roads, snorting defiance at each other, and stamping beneath their hoofs all principles of ethics and etiquette. To remedy this evil, the Code of Ethics came into existence. Certain centaurs resisted subjugation. At the present time the tendency is to carry matters to the opposite extreme and thrust professional conduct into rigid forms of plaster-bandage inflexibility. As the result of this over-refinement, a new species of the medical man, "the medical dude," has come into existence. "Let the centaurs and the dudes fight over the code! What we want is not so much a better form of ethics as a better knowledge of the great principles underlying all codes."

DR. J. F. TODD, of Chicago, on behalf of the Committee on Registration, reported that one hundred and twenty-six delegates had registered.

The Report of the Committee on Practical Medicine, DR. J. C. FRYE, of Peoria, Chairman, was presented, and was a faithful effort at sketching the progress made in practical medicine during the past year.

AFTERNOON SESSION.

DR. PRINCE, of Jacksonville, on motion, was permitted to present a voluntary paper upon

CLOSURE OF THE SOFT AND HARD PALATE,

and exhibited a lad upon whom he had recently operated, with more than usual success, both as regards union and recovery of function. The case was one of single cleft of hard and soft palate, without harelip.

The Report of the Committee on Surgery, DR. ROSWELL PARK, Chairman, gave a very brief summary of progress in surgery during the past year.

DR. DAVID S. BOOTH, of Sparta, presented a well-considered paper on *Sponge Grafting*. This method had been tried with excellent results in three cases.

DR. H. GRADLE, of CHICAGO, presented a paper upon

THE ETIOLOGY OF DISEASE,

in which he pointed out that the search for the causes of disease can best be systematized by making a sharp distinction between primary diseases and secondary disturbances. The former represent the direct reaction of living tissue to injurious influence of external origin, as seen in any infective disease or any injury, while the latter are dependent, not on any external cause, but on some preëxisting primary disease, primary lesion, or structural anomaly, somewhere in the body. As a type of a secondary disturbance, may be mentioned a cerebral embolism due to a plug derived from a diseased cardiac valve.

The only causes of primary disease known are (1) physical influence, for example, trauma, extremes of temperature, and electric currents; (2) chemical action, as poisons, or, in a negative way, the deprivation of indispensable food constituents; and (3) parasites.

In discussing the importance of parasites, both animal and vegetable, the writer showed what had hitherto been done in finding supports for the germ theory. He insisted that the parasitic origin of any disease can be accepted as proved only when the parasite has been found in every case examined during the active stage of the disease, and to an extent commensurate with the extent of the lesion, and when the disease has been reproduced by inoculation with isolated parasites. He stated it as singular that those who still oppose the germ theory on account of insufficient familiarity with the facts, have never demanded or suggested any better proofs of the parasitic origin of any disease than these mentioned. He then reviewed the work of the past year in tracing the bacteria of pneumonia, osteomyelitis, cholera, typhoid fever, diphtheria, and xerosis of the conjunctiva. He pointed out the value of Koch's work in tuberculosis, and the demonstration accomplished by him and others that scrofulous glands and lupus are but tubercular lesions.

While each primary disease, as far as it represents a single, uncomplicated disorder, has but one exciting cause, there may exist numerous predisposing conditions. These should not be called predisposing causes, for they cannot *cause* the disease; they can only favor its occurrence. The predisposing conditions comprise the conditions determining the mode of life and distribution of disease germs outside of the body and the influences interfering with the resistance of the body to the parasitic invasion. Under the former head the most important question is whether the germs of any given disease can vegetate outside of the body under the conditions existing in nature, or whether they are limited to a parasitic life in animals. The extent of our information on this point was discussed and the practical bearing illustrated by mentioning the detection of the cholera bacilli in an infected tank in India, and of the pneumonia micrococci in the filling of the floors in a prison in which the disease occurred as an epidemic. The

speaker then referred to the researches of some English physicists on the conditions determining the deposition of floating dust and their relation to the invasion of the body by germs.

In illustration of recent work having reference to predisposing conditions which made the body more prone to parasitic invasion, were mentioned the importance of minute lesions in erysipelatous and diphtheritic infection of indigestion in permitting the cholera bacilli to pass through the stomach where the acid otherwise kills them, and of desquamation of bronchial and pulmonary epithelium from measles in favoring the invasion of the lungs by the bacillus tuberculosis.

A striking instance was related of the spread of pulmonary tuberculosis amongst cattle in the vicinity of the smelting works at Freiburg, in Saxony, where the arsenical fumes emitted by the furnaces start a capillary bronchitis developing subsequently into phthisis on account of the favorable conditions for the vegetation of the tubercle bacilli. Reference was then made to mixed infections, recent researches having shown that the occasional atypical course of such diseases as typhoid fever and diphtheria, and probably many others, is due to secondary invasion of the body by other, in a certain sense accidental, bacteria. There exist also diseases, which, while they are primary in being parasitic invasions, are secondary in a certain sense, since they depend on the previous existence of the same kind of infection in another part of the body; for instance, gonorrhœal joint affections in which the gonorrhœal micrococci have been detected in the blood and the diseased joints. Secondary disturbances are due to the influence which a diseased part or structural anomaly may exert on distant organs through mechanical contiguity, through the vessels, or through the nerves. Amongst the new contributions to this subject were mentioned the instances of self-poisoning known as acetonaluria, or diabetic coma, which have been reported also in connection with other diseases than diabetes; furthermore, the effects of fibrin ferment liberated in consequence of blood extravasations. The various organs were then reviewed as starting-points of nervous disturbances. The intestinal canal is especially significant in this respect, mention being made of Bartholow's "enteric paraplegia." The reflexes, taking their origin from anomalies of the sexual system, from eye-strain, and from ear-diseases were also considered. Finally, the important work of Hack and some confirming observers was referred to, which has taught us that the surface of the cavernous plexus lining the inferior turbinated bone of the nose is very frequently the starting-point of important nervous symptoms and even slight structural changes, as œdema of the skin and serous effusions into muscles. These occurrences may explain many instances of that mysterious bug-bear "taking cold" as complicated reflex actions originating in irritation of the sensitive area in the nose.

DR. E. F. INGALS said that not only the structures covering the middle turbinated bone, but also those covering the inferior—particularly its posterior end—and the lower half of the septum, contained nervous elements, irritation of which gave origin to various forms of cough and asthma. Nine cases out of ten of hay asthma were due to irritation of these nerve fibrils. The indication in the treatment of these is to cauterize and destroy, by the galvano-caustic wire, all redundant tissue or isolated spots, as revealed by the probe.

DR. VAN HORN, of Jerseyville, thought Dr. Ingals's treatment heroic. The laudanum spray or inhalation had been effective in his hands in aborting hay asthma.

The Report of the Committee on Gynecology, DR. W. S. CALDWELL, of Freeport, Chairman, was presented, and referred to the Committee on Publication.

WEDNESDAY, MAY 21ST—SECOND DAY.

The Committee on Necrology presented a report, which was received and referred to the Committee on Publication.

THE SPECIAL COMMITTEE ON VACCINATION,

DR. M. F. BASSETT, of Quincy, Chairman, presented a report which concluded with a vehement protest against bovine virus, as slow and uncertain in action, and as productive of profound local and constitutional disturbances.

DR. S. H. LAMBERT, of Assumption, thought that the objections to bovine virus would be entirely removed if quills were employed, and the patient received from two to four grains of salicylic acid or sodium salicylate, three times daily, in case of fever.

DR. EPHRAIM INGALS obtained good results with both humanized and bovine virus. In females, the place of selection should be the leg, as a less beautiful member than the arm.

DR. COOK, of Mendota, preferred humanized virus.

DR. CLARK, of Chicago, used humanized virus. In his younger days he had employed bovine virus upon one occasion, and severe local disturbance arose, accompanied by a peculiarly offensive discharge, namely, the discharge of the doctor.

DR. A. B. STRONG, of Chicago, used bovine virus with excellent results.

DR. J. I. CORCORAN, of Brimfield, had been inoculated in his youth; there was danger of introducing syphilis in the use of humanized virus, and of causing serious local and constitutional disturbance by employment of the bovine material; he did not believe in vaccination at all. It was useless, unwarranted cruelty.

DR. JONES, of Danville, referred to his experience during the war, at Lebanon, Kentucky, as a protest against humanized virus.

DR. WALTER HAY, of Chicago, preferred bovine virus.

DR. H. A. JOHNSON, of Chicago, shortly after the fire, in his official capacity as physician to the Relief and Aid Society, received authentic records of forty thousand cases of vaccination, in which humanized virus was employed, with not one case of syphilis, and only five or six cases of sloughing or erysipelas as a result. When local troubles followed, it was highly probable the scratch of a pin would have produced the same effects. Of one hundred thousand immigrants, who were vaccinated and kept under observation from one to three weeks, uniformly good results were obtained with bovine virus. The method of propagation of bovine virus was usually faulty, and when this was the case, humanized virus was preferable.

Dr. C. H. Norred, of Lincoln; Dr. H. T. Gill, of Ohio; Dr. S. J. Jones, of Chicago; and Dr. Edmund Andrews were favorably disposed to bovine virus, believing, however, that in the operation of vaccination the condition of the patient's system was an important factor.

DR. CHRISTIAN FENGER, of Chicago, was then invited to read a voluntary paper on

EXCISION OF THE HIP AND KNEE-JOINT, WITH SPECIAL REFERENCE TO THE FINAL RESULT.

He said that Volkmann's indications for operation are four in number:

(1) Presence of abscess in joint, fistulous communication with air, evening rise of temperature, and emaciation. (2) Chronic cases, when high fever is developed from suppuration in joint. (3) Formation of iliac abscess, indicating acetabular perforation. (4) Suppuration established within the joint, accompanied by complete luxation of head of femur. Dr. Fenger adds a fifth indication. (5) Detachment of the epiphysis of the head of the femur.

The paper was well illustrated by the exhibition of three cases, in which excision had been resorted to at an early period. The pathological specimens taken from the cases and presented for examination elicited much interest.

AFTERNOON SESSION.

DR. H. A. JOHNSON, of Chicago, read a brief abstract of a paper upon

BILATERAL PARALYSIS OF THE POSTERIOR CRICO-ARYTENOID MUSCLES,

and exhibited the patient who was the subject of the paper. Three years ago, tracheotomy was performed by Dr. Andrews, and the case then passed into the hands of Dr. Morell Mackenzie and Dr. Lennox Browne. Letters from both these gentlemen were read.

The patient wears his tracheal tube with perfect comfort. As regards the causation of the paralysis, Drs. Johnson, Mackenzie, and Browne are very much in the dark, but regard fixation of the arytenoid cartilages as standing in that relation.

DR. E. F. INGALS related his own experience in connection with a case of paralysis of the abductors, due to carcinoma, in which tracheotomy had prolonged the patient's life.

DR. D. W. GRAHAM, of Chicago, presented a paper on *Tracheotomy in a Case of Asphyxia Resulting from Goitre*, with exhibition of patient.

The Committee on Diseases of Children, DR. J. P. MATTHEWS, of Carlinville, Chairman, presented a report, which was referred to the Committee on Publication.

The Committee on Physiology, DR. A. WETMORE, of Waterloo, Chairman, likewise presented a report, which was referred to the Committee on Publication.

THE COMMITTEE ON ORIGINAL INVESTIGATION,

DR. N. S. DAVIS, of Chicago, Chairman, reported progress, and asked continuation for another year, with the appointment of two additional members.

Dr. Davis said that it had been the object of the Committee to determine the meteorological and telluric conditions of three acute diseases, to wit: acute rheumatism, acute pneumonia, and diphtheria, by sending out circulars to practitioners throughout the State, and obtaining data from the Signal Service Stations, in the manner of the Collective Association of the British Medical Association. He was of the opinion that bacteria did not play an exclusive *rôle* in the causation of disease, and that facts derived by the method of investigation, would have a healthful sedative effect upon the germ-theory fever. Two hundred and fifty dollars had been devoted to these investigations, and was an amply sufficient sum.

DR. F. C. SHAEFER, of Chicago, then read a voluntary paper on *Fracture of the Humerus into the Bicipital Groove, with Splitting off of the Greater Tuberosity*, and exhibited a patient to whom this accident had occurred.

THURSDAY, MAY 22D—THIRD DAY.

The Committee on Legislation for the Insane, DR. WALTER HAY, of Chicago, Chairman, reported progress, and stated that at the next meeting of the State Legislature important results would be secured.

THE COMMITTEE ON AMENDMENTS TO THE ANATOMICAL LAW,

DR. A. B. STRONG, of Chicago, Chairman, reported that there had been great difficulty in obtaining dissecting material during the past year in Chicago, due to the fact that the Board of County Commissioners refused to deliver up the pauper dead, on the ground that the law was *not mandatory*. There was abundance of material, but the Commissioners demanded such an exorbitant price that it was cheaper to go to other markets.

An amendment, making the law of delivering up the pauper dead to physicians in city and county, for scientific purposes, mandatory, had been drawn up, and a copy had been mailed to every one of the five thousand practitioners of medicine in the State of Illinois. Each copy of the amendment was accompanied by a letter requesting each practitioner to use his influence with his Representative in the Legislature.

DR. J. F. TODD, on behalf of the

COMMITTEE ON REGISTRATION,

reported the presence of one hundred and forty-four regular delegates.

The following were then elected

OFFICERS FOR THE ENSUING YEAR

on the recommendation of the Committee on Nominations:

President.—Dr. David S. Booth, of Sparta.

Vice-Presidents.—Drs. S. C. Plummer, of Rock Island; W. T. Kirk, of Atlanta.

Secretary.—Dr. S. J. Jones, of Chicago.

Treasurer.—Dr. Walter Hay, of Chicago.

Assistant Secretary.—Dr. H. B. Buck, of Springfield.

Members of the Judicial Council.—Drs. S. K. Crawford, of Monmouth; G. W. Jones, of Danville; John Wright, of Springfield.

Committee of Arrangements.—Drs. Griffith, Mathews, Rauch, Whitney, and Buck, all of Springfield.

Place of meeting, Springfield.

DR. CHRISTIAN FENGER then read an abstract of a paper on

SURGICAL TREATMENT OF GANGRENE OF THE LUNG.

Four operations for gangrene of the lung had been performed up to date. The *first* was performed in 1879, by Lawson and Cayley, London, for gangrene of five weeks' standing (Medical Society of London, 1880). The cough was lessened, dyspnœa and fetor diminished. Patient died on fourth day after operation. From the

autopsy it was concluded that if the operation had been performed earlier the chances for a favorable termination would have been greater. The *second* operation was performed by Solomon Charles Smith, in Halifax, 1880, for acute gangrene, occurring in the lower lobe of left lung, in the second week of croupous pneumonia. Cough was rendered less aggravating, dyspnœa and fetor decidedly influenced for the better. Patient died on the tenth day. No autopsy. The *third* operation was performed by Buhl, of Christiana, Sweden, in 1880, for acute gangrene. The anterior portion of left lung was removed. Patient recovered after six weeks' convalescence. The *fourth* case occurred in the practice of Christian Fenger, Chicago. The patient, male, thirty-four years old, was in the latter part of second week of croupous pneumonia. The lung was in the stage of resolution. There were much pain, distressing cough, expectoration of one pint of sputa in twenty-four hours, progressive loss of strength and appetite. The fetid breath of the patient was intolerable. Percussion gave dulness in right infra-mammary region, extending into right axilla. Auscultation revealed signs of cavity corresponding to this area. Cavity was found by insertion of the needle of a hypodermatic syringe. An incision was made parallel to right clavicle, portions of the ribs removed, the needle inserted into the cavity as a guide, the cavity opened by the small platinum point of a Paquelin's thermo-cautery, to sufficient extent to admit the index finger. No loose necrotic tissue being found, the cavity was washed out and antiseptic dressing applied. Subsequently, bits of necrosed lung tissue were discharged through the thoracic opening. Irrigation of the cavity invariably brought on violent spells of coughing. Hemorrhage was trifling. Five hours later the fetor had diminished perceptibly. The patient improved steadily, and at time of presentation of the paper, five weeks after the operation, was sitting up half the day.

As regards the *technique* of the operation, the writer called attention to the line of incision; it should be parallel to the clavicle, or ribs. One or more ribs must be excised throughout a sufficient extent. It is necessary to use the needle of a hypodermatic syringe as a guide. With the Paquelin, hemorrhage is inconsiderable. The cavity should be washed out if practicable. Care must be exercised in this procedure, as there is danger of drowning the patient if the cavity communicates with a bronchus.

Buhl observed no irritating cough as the result of irrigation of the cavity. Mosler, however, had seen the same result as that noted in the writer's case, namely, very irritating cough consequent upon the irrigation. Mosler ascribed death to the use of a weak solution of thymol. Turpentine inhalations were regarded as superfluous, if not positively injurious. After-treatment must be conducted on well-recognized surgical principles.

DR. THAYER then offered the following conclusion: Surgical interference in acute, circumscribed pulmonary gangrene is indicated; there is no immediate danger of the patient's death if the operation is properly performed.

The Committee on Obstetrics, DR. S. K. CRAWFORD, of Monmouth, Chairman, presented a report, which was referred to the Committee on Publication.

DR. R. H. BABCOCK, of Chicago, then presented an interesting case of

DEXIO-CARDIA,

occurring in a boy, three years old. The heart was shown to lie entirely to the right of the left edge of the sternum, the apex beating below the right nipple. The organ was so hypertrophied as to cause prominence of the costal cartilages of that side. It was not congenital, since the abdominal viscera were not transposed, as—according to Schrötter—is always the case in congenital dexio-cardia. The history was obscure, but the author concluded, from the present condition of the right lung, that it was the result of pleuritic adhesions. There was undoubtedly mitral lesion, as there was a systolic and diastolic murmur, partaking of the character termed by the French, *bruit de galop*. In conclusion, the Doctor referred to a similar, though more complicated, case, occurring in a man thirty-two years of age, which he has had under observation since last January.

Opportunity was subsequently given the members of the Society to examine the boy.

AFTERNOON SESSION.

REPORTS

from the Committees on Gynecology, Ophthalmology, and Otology, and on Drugs and Medicines, were received, and referred to the Committee on Publication.

THE TREASURER'S REPORT.

DR. WALTER HAY reported the receipts during the last year, with the balance on hand May 15, 1883, to be $1732, and the expenditures $591; balance in treasury, $1141.

The following voluntary papers were then presented:

Near-sightedness Developed during School-life, by F. C. Holz, Chicago. This paper was a repetition of the investigations of Javal.

Sudden Suppression of Catamenia, by Dr. Whitmeyer, of Metamora.

General Principles of Treatment of Pott's Disease, by J. C. Webster, M.D., of Chicago.

Pancreatic Anæmia, by C. W. Earle, M.D., of Chicago. An excellent paper, based on four cases of cirrhosis of the pancreas, with symptoms of pernicious anæmia, accompanied by reports of autopsies of all the cases.

Mastoid Abscess, by E. L. Holmes, M.D., of Chicago.

Purulent Inflammation of the Middle Ear, by Dr. H. Gradle.

PRIZES.

DR. WALTER HAY offered a resolution, which was adopted, offering a prize of one hundred dollars for the best paper on "Diphtheria;" and one hundred dollars for the best paper on ten cases of any disease, in tabulated form, occurring in the practice of the writer, to be read at the next meeting of the Society. The prizes are to be awarded by a committee of three, to be appointed by the President.

THE PRACTICE OF MEDICINE IN ILLINOIS.

DR. E. INGALS offered a resolution, which was adopted, requesting the passage of a law to prevent anyone from practising medicine in Illinois unless a graduate of a respectable medical college.

Adjourned.

A BANQUET

at the Grand Pacific Hotel, tendered the delegates by the medical profession of Chicago, took place on Wed-

nesday evening, May 21st. CHARLES GILMAN SMITH, M.D. (University of Pennsylvania), presided as toastmaster in the happiest manner. Owing to the wise selection of toasts and speakers, the banquet proved a brilliant success.

THE LOUISIANA STATE MEDICAL SOCIETY.

Stated Annual Meeting, held at Baton Rouge, May 21, 22, and 23, 1884.

(Specially reported for THE MEDICAL NEWS.)

WEDNESDAY, MAY 21ST—FIRST DAY.

THE Society was called to order at 11.55 A.M., by THE PRESIDENT, DR. J. P. DAVIDSON, of New Orleans.

DR. J. W. DUPREE, of Baton Rouge, Chairman of the Committee of Arrangements, then introduced Hon. G. L. Day, Mayor of the City of Baton Rouge, who welcomed the Society to this city.

DR. R. H. DAY, in behalf of the Baton Rouge Medical Association, extended a cordial and paternal greeting to the Society. He took occasion, in the course of his remarks, to call attention to the ignorance of the people of, and their indifference to, matters of sanitation. He urged upon the members of the Society the paramount duty of instructing the people in the fundamental principles of sanitary science, and of appealing to the General Assembly for appropriate legislation on this subject.

DR. E. M. HOOPER, of East Feliciana, moved that a Committee on Credentials, consisting of five members, be appointed. Carried.

Pending the appointment of the committee, on motion of DR. BICKMAN, the rules were suspended and the following physicians were proposed, and by acclamation

ELECTED MEMBERS OF THE SOCIETY:

Dr. Samuel F. Mecker, of Rapides; Dr. T. P. Vaughn, of West Baton Rouge; Dr. King Holt, of Iberville; Dr. H. D. Bruns, of New Orleans; Dr. Stanhope Jones, of New Orleans; Dr. D. C. Tebault, of New Orleans; Dr. G. B. Lawrason, of New Orleans; Dr. J. H. Bemiss, of New Orleans; Dr. T. Hebert, of Iberia; Dr. Bernard, of East Carroll; Dr. T. J. Buffington, of East Baton Rouge; Dr. W. O. White, of Vermillion; Dr. W. B. Meng, of Concordia; Dr. L. F. Reynaud, of Baton Rouge; Dr. J. B. Duchin, of East Baton Rouge.

THE PRESIDENT then announced the following

COMMITTEE ON CREDENTIALS:

Dr. Hooper, of East Feliciana; Dr. Bickham, of New Orleans; Dr. Fish, of Rapides; Dr. Tebault, of New Orleans; Dr. Henry, of New Orleans.

The Committee after a short recess reported the credentials of all delegates in correct form.

REPORTS OF OFFICERS.

The report of the Corresponding Secretary, in his absence, was read by Dr. J. H. Bemiss, of New Orleans.

The report of the Treasurer showed that eighty members were in arrears as to annual dues. Of a number obligating themselves at the last annual meeting to pay an additional five dollars towards the maintenance of the Society, ten were in arrears. Estimating these sums as collectable, and adding the amounts now in the Treasurer's hands, the assets of the Society were shown to be $646.

DR. DAVIDSON, Chairman of the Committee on Organization, to which had been referred the

EXPEDIENCY OF FORMING A TRI-STATE MEDICAL SOCIETY,

of the States of Texas, Arkansas, and Louisiana, reported adversely on the same. Also adversely on the granting of certain privileges to those members subscribing an additional five dollars. The adoption of the report was made a special order for to-morrow's session.

EVENING SESSION.

DR. DAVIDSON delivered the

ANNUAL ADDRESS,

the tenor of which was a more complete organization of the Society, as a necessity for the well-being both of the profession and the public in general. To this end, he urged the formation of affiliating parish societies. By better organization and more numerous delegates, we could hope to spread among the people a better knowledge of sanitation and hygiene, and could also hope to obtain more efficient legislation. Moreover, with parish affiliating societies, vital statistics—so important to the advancement of our knowledge, both general and practical—could be collected and analyzed. He then touched upon the formation of a State Board of Health, and ended by stating in detail a plan by which vital statistics and mortuary reports could be collected, and, through the State Board, be classified, tabulated, and studied.

COL. K. A. CROSS then delivered an address on *The Principles Controlling the Mind and Directing the Tendencies of the Age.*

The paper was listened to with much interest, and at its conclusion was referred, with a vote of thanks, to the Publication Committee.

THURSDAY, MAY 22D—SECOND DAY.

MORNING SESSION.

A letter from Dr. Hardie was read, stating that he was compelled to go home, and calling the attention of the Society to the following points:

a. The clause in the Constitution of the State whereby any debt save that to a physician could be satisfied by a lien on property. It should be extended so as to include debts to physicians.

b. While tools of an artisan were free from seizure by the Constitution, a physician's books and instruments owned no such immunity.

c. That the law with reference to the registration of physicians be amended so as to be more efficient.

d. The extra fees paid by certain members be considered as fees for the ensuing year.

e. That his essay on *Germs and Contagion*, if found worthy, be read and referred to the Publication Committee; if not, that it be returned into his hands.

DR. HOOPER moved that suggestions *a* to *d*, inclusive, be referred to the Committee on State Medicine, and suggestion *e* to the Publication Committee. Carried.

DR. LOVE recommended Dr. W. A. Burris, of Ascension, for membership; Dr. Guilbeau, Dr. Leslie.

DR. CHAILLÉ, of New Orleans, moved that the rules

be suspended, and that the gentlemen be elected by acclamation, which was done.

THE COMMITTEE ON STATE MEDICINE

reported through its Chairman, DR. S. E. CHAILLÉ, of New Orleans, that it had placed in the hands of Judge Sevy the following subjects, to be elaborated into bill form, and presented to the General Assembly:

1. Law for the creation of a State Board of Health, whose members shall be selected from the various districts of the State.

2. Law to protect confidential communications to physicians of a professional character.

3. Law requiring the teaching of hygiene and elementary physiology in the public schools.

The Committee also reported that, deeming it very desirable to prevent the practice of obstetrics throughout the State by ignorant midwives, they nevertheless deemed it inexpedient to press for legislation on the subject at this time.

DR. CHAILLÉ then read the printed petition of the Auxiliary Sanitary Association and other scientific bodies, praying the General Assembly to pass a law making instruction in the elements of hygiene and physiology compulsory in the public schools. Dr. Chaillé then moved that the Society endorse this petition. Carried.

THE PRESIDENT announced the appointment of a

NOMINATING COMMITTEE

in order, and stated that at the last meeting this Committee had been formed by the members from each parish selecting one of their number to represent them in the Committee. He urged that the same method be pursued, and declared a recess of ten minutes for the choice of the Committee.

The Committee subsequently reported, through its Chairman, the following nominations for

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. R. H. Day, of East Baton Rouge.

Vice-Presidents.—Drs. C. J. Bickham, of New Orleans; E. S. Lewis, of New Orleans; T. J. Buffington, of East Baton Rouge; C. M. Smith, of Franklin; I. J. Newton, of Bastrop; T. J. Allen, of Shreveport.

DR. DAY moved that the rules be suspended, and that Drs. I. A. Williams and Kauffman be elected members of the Society. Carried.

DR. BRUNS, of New Orleans, read a paper on

ACUTE PLASTIC IRITIS,

which was based upon an analysis of fifty-five cases treated in the Charity Hospital during the past sixteen months. He stated that a knowledge of the disease by the general practitioner was desirable, because of its frequency, five per cent. of all eye cases treated in the Hospital being of this nature. He said that out of the fifty-five cases, thirty-three were undoubtedly due to syphilis. He pointed out that the disease could be recognized by the peculiar redness, the character of the pain, and the functional impairment of the pupil, and urged prompt and vigorous treatment with strong solution of atropia sulphate, mercury, and hot-water fomentation; and called attention to the fact that in no case had the patient applied for treatment at an earlier date than the seventh day, and his tables showed that this date having been passed, no influence upon the results seemed to have been exerted by any delay in the institution of treatment, even up to the thirty-fifth day. The main feature of the paper was its clearness and simplicity.

DR. G. B. UNDERHILL, of New Orleans, read a paper on

THE SPLEEN; ITS ANATOMY, PATHOLOGY, AND SOME OF ITS LESIONS,

which dwelt especially upon the *rôle* played by the unstriped muscular fibres in this viscus; upon the action of the organ as a reservoir for superfluous blood of the circulation; and upon the influence of the chronically enlarged spleen upon the healing of wounds near the rectum. He also dwelt at length upon the pathogeny of chronic splenitis with enlargement in malarial fever.

The Secretary read a paper by DR. M. SCHUPPERT, who was absent, on

TETANUS AND TETANY.

He took the ground that tetanus, which is invariably preceded by a wound, is the result of blood-poisoning due to some microörganism. This point was supported by strong analogical reasoning. On the other hand, the author maintained that tetany, which may be readily differentiated from tetanus by a number of well-marked symptoms enumerated by the author, is a disease of the central nervous system, and not fatal in its nature. This highly interesting paper was of such a nature as not to admit of a fair synopsis, and will be published in the *Transactions* for 1884.

Dr. Hardie's paper on *Contagion and Germs* was read by the Secretary.

ANÆSTHETICS.

DR. UNDERHILL moved that a committee of three be appointed to obtain from all reliable sources data with reference to sulphuric ether, chloroform, and a mixture of ether, chloroform, and alcohol.

DR. DAY said that the manner of administration is probably the most important factor in the production of unfortunate results, and statistics should be compiled with especial reference to this point.

DR. E. S. LEWIS did not consider it a matter for investigation by the Society, but thought that Dr. Underhill should rather make it a subject of personal investigation to be reported upon by him at the next annual meeting.

DR. CHAILLÉ thought that the Society might do a useful work by lending its influence to the investigation, and added that the Society should make it a point always to assist the younger members in their work. Motion unanimously carried.

DR. DAY moved a vote of thanks to the readers and writers of the papers which had been read. Carried.

EVENING SESSION.

THE PRESIDENT announced the following Committee on Chloroform, as contemplated by the resolution introduced in the morning: Dr. G. B. Underhill, Dr. H. D. Bruns, Dr. G. B. Lawrason.

MEDICAL LEGISLATION.

JUDGE SEVY being introduced, stated that he had come before the Society by request, to offer some state-

ments with reference to points for legislation, which had been introduced by this and other cognate bodies. The first point for legislation was the establishment of a State Board of Health. Though it was neither desired nor intended that any reflections be cast upon the present or preceding Boards of Health, still it was universally acknowledged that the Board, as now constituted, is only a local Board, and withal patched and repatched by law upon law, until its usefulness was dangerously curtailed. The proposed law contemplated a veritable State Board composed of representative physicians and others from all parts of the State, with the Secretary a physician and with powers both corporate and politic. The second recommendation for legislation was the protection of confidential communications to physicians by patients. He could see no difficulty in the way of the passage of this bill. The next was sanitary instruction. This is formulated in the memorial of the physicians in this way: that public schools throughout the State should teach physiology and hygiene. He would suggest that the request of the Women's Christian Temperance Union be acceded to, and the addition made "with special reference to the affects of the abuse of alcohol, narcotics, and anæsthetics." Compensation for expert testimony. He was in favor of such an Act, and hoped for its success. Insane criminals. This proposed law looked partly to the checking of the too frequent pleading of insanity for crime, and the prevention from punishment, and the taking care of the actually insane. It was a good move. The Coroner, his selection and duties. Public institutions, the giving of control of, to the State Board of Health. The practice of pharmacy, a law designed to prevent the selling of poisons and adulterations, and the prescribing by druggists. All of these were good, and he hoped they would pass.

DR. F. FORMENTO, of New Orleans, read a paper on

CREMATION.

He spoke of the prejudice existing against this practice, and contended that it did not conflict with any religion. He cited many instances to show its great antiquity and its present revival. He discussed the effects of inhumation upon the living, and concluded by describing the *modus operandi* of cremation and the absence of anything whatsoever, save prejudice, calculated to shock the most sensitive or the most bigoted.

FRIDAY, MAY 23D—THIRD DAY.

MORNING SESSION.

DR. J. H. BEMISS offered a resolution to the effect that the Society express its interest in the success of the Exposition, and that it urge upon its members individually, and upon affiliating and other medical societies throughout the State, that they exert themselves to forward in any manner in their power, any plans or specimens by which the Managers of the Exposition may propose to illustrate the natural history and resources of the State.

QUARANTINE.

DR. CHAILLÉ said that Col. Zacharie, the Attorney of the Board of Health, was present, and would be pleased to state in a few words the projected action of the Board. The first was a proposition to invite, in the month of June, a conference of health authorities of the neighboring States, the object being to come to an understanding as to the duties and responsibilities of each in matters of health, and especially quarantine.

The next proposition was the establishment of a lower quarantine station. He spoke of the history of quarantine in the State, tracing the gradual removal, from year to year, of the station, until at present it was forty miles below the city. It was now proposed to have two stations, one near the mouth of the river, but in one of the unused passes, where vessels actually infected could be detained and attended; and the other at the present point, where only those vessels would be allowed to anchor which had hailed from an infected port, or one proclaimed as infected, but were themselves healthy. The objection to sending ships to Ship Island was twofold. The State has no control over ships out of the waters of Louisiana, and captains ran the risk of forfeiting their insurance if they deviated from the course laid down in their papers.

COL. ZACHARIE spoke of the arrangments which had been perfected to carry out their plans just so soon as the Legislature authorized them to do so. He spoke of the Declaration of the International Quarantine Assembly of Europe, promulgated years ago. By this declaration infected vessels could always be sent to lazarettos, which were convenient and numerous, but never until aid of needed kind was furnished. He went on to speak of the non-intercourse policy of Louisiana, and how all the world disapproved of it; among others he would cite especially the ex-President of the Board of Health, Dr. Joseph Jones. He pictured the spectacle of an infected ship in a time when every seaport had declared a policy of absolute non-intercourse. Refused admission at every port, unaided by food or medicine, drifting helpless upon the waters, it would stand as an awful commentary upon an age which allowed such inhumanity and barbarism.

DR. CHAILLÉ thought such occurrences entirely unnecessary, and easily avoided if, when a State decides to adopt a non-intercourse policy, it so declare its intention not *ten* days before, but months—three to six months—before the proclamation goes into effect. He believed that the moiety of trade with the proclaimed port was nothing to the vast stream of commerce which flowed to us from the West, and that one yellow fever epidemic in twenty years did New Orleans and Louisiana more damage than non-intercourse for forty years. He added that, even with the facilities now existing at the Quarantine Station, ships were detained. Unloading and disinfection of vessels should be done with dispatch.

COL. ZACHARIE reviewed the means by which disinfection was practised, and stated that arrangements for laborers and warehouses were complete.

DR. S. JONES stated that this non-intercourse policy had been adopted and recommended, not by his father, Dr. Joseph Jones, but by a special meeting, called for the purpose, in conjunction with a conference committee.

DR. CHAILLÉ, though thinking as he had before indicated, moved that the Society heartily approve any measures adopted by the Board designed to separate infected and non-infected vessels. Resolution adopted.

DR. LOWE remarked that, at the last meeting, the Society had endorsed

VACCINATION AND REVACCINATION.

He was sorry to say that his experience had been such as to compel him to ask the Society to again so express itself. He, therefore, offered a resolution endorsing vaccination and revaccination, and urging the police juries of the parishes to give the matter their earnest attention.

After some discussion of the powers of police juries in the matter, the resolution was carried.

The PRESIDENT-ELECT, DR. R. H. DAY, announced the usual committees, and then, on motion, the Society adjourned, to meet in New Orleans, on Wednesday, January 14, 1885.

THE MEDICAL ASSOCIATION OF THE STATE OF MISSOURI.

Twenty-seventh Annual Session, held at Sedalia, May 20, 21, and 22, 1884.

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, MAY 20TH—FIRST DAY.

THE ASSOCIATION was called to order by THE PRESIDENT, DR. E. H. GREGORY, of St. Louis.

DR. OHMANN-DUMESNIL, of St. Louis, presented a paper on

ECZEMA,

written, he said, for the purpose of calling out suggestions in the treatment of that very troublesome affection, but no one seemed to have discovered anything new on the subject.

DR. GREGORY, of St. Louis, spoke of a case of local eczema confined to the lower extremities which he had treated by confining the patient to his bed and elevating his feet.

DR. G. M. DEWY, of Keytesville, then presented a paper on *The Cause and Cure of Quacks and Quackery.*

AFTERNOON SESSION.

Prominent among the papers read during the afternoon session was one by DR. GLASGOW, of St. Louis, in which he reported a

CASE OF SLOW PULSE,

ranging from thirty-eight to forty-five per minute. The patient suffered from general nervous excitement, and he thought that the slow pulse came from over-stimulation of the pneumogastric nerve. The heart acted as if its inhibitory nerve was being galvanized, The pulse became normal when the general nervous symptoms were relieved.

DR. TEHOLSKY, of St. Louis, spoke of several cases in his practice of very slow pulse, in two or three of which there had been autopsies, and in each the coronary arteries were found occluded. He thinks that a majority of such cases are caused by disease of those vessels and malnutrition of the heart.

DR. LESTER, of Kansas City, spoke of an apparently healthy soldier who had been looked upon as a curiosity by his comrades, on account of his slow pulse, which ranged from 35 to 45 at the wrist, and was not very strong. When the ear was placed over the heart, to each radial pulsation there could be distinguished two distinct "thrub-dubs," showing that his heart did beat as often as those of other men. But as every alternate contraction seemed to give a light sound, he thought that these impulses failed to reach the radial artery.

EVENING SESSION.

This session was principally occupied in reading the reports of the Committee on The Relation of Spirit-drinking, Insanity, and Crime, which showed a vast amount of assiduity in searching to secure facts. The committee had communicated with almost every asylum and penitentiary within the United States, and had secured not a little valuable information from foreign countries.

DR. POTTER, of Cameron, Chairman of the Committee, estimated that sixty-five per cent. of all crimes committed in this country were directly or indirectly caused by the drinking of alcoholic liquors; and that seventy-five per cent. of all the inmates of insane asylums were there as a result of the use of the same intoxicants, either by the subjects themselves or some one or more of their ancestors in the first or second generation back.

DR. HART, of Brownsville, brought in a minority report, which was in substance the same as Dr. Potter's paper. He estimated the per cent. of crime caused by liquor at seventy-five, and the insanity at eighty.

WEDNESDAY, MAY 22D—SECOND DAY.

DR. E. H. GREGORY, of St. Louis, delivered

THE PRESIDENT'S ADDRESS,

choosing for his subject, *Neoplasms from a Practical Standpoint.*

After stating that some authors claim that all neoplasms are inflammatory, he asserted that they are not so, since inflammation is a constructive process and always comes to the aid of nature when any part is to be protected or repaired, while the formation of "tumor neoplasm" is essentially a destructive process.

The point of practical interest to the surgeon is in diagnosticating between inflammatory and non-inflammatory neoplasms. If they are inflammatory, they tend to cure themselves; if non-inflammatory, unless there is some special reason, they are malignant or benign. If the neoplasm is of the tumor variety, to distinguish whether it is malignant or benign is a secondary consideration, for in either case the watchword is to operate early.

AFTERNOON SESSION.

DR. HARDAWAY, of St. Louis, read a paper on *Idiopathic Sarcoma of the Skin.*

DR. P. V. SCHENCK, of St. Louis, then read a paper entitled *Periodic Pains Caused by Diseases of the Womb and its Appendages, not Relieved by Antiperiodics.* He reported a number of cases in which the patients had suffered by periodical pains, and in which quinine even in large doses was used without affording relief. He found in all of these cases an unhealthy condition of the womb or its appendages, and he relieved the pain by local treatment.

DR. ENGELMANN, of St. Louis, agreed with Dr. Schenck as to the non-malarial origin of some of the

periodic pains which women suffer, but thought it safe to give quinine.

DR. FITZGERALD, of Lathrop, suggested sulphate of nickel as a remedy for the relief of non-malarial periodic pains.

THURSDAY, MAY 22D—THIRD DAY.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. H. H. Middlekamp, of Warrenton.

Vice-Presidents.—Drs. T. F. Prewitt, of St. Louis; W. E. Evans, of Boonville; B. G. Dysart, of Paris; H. W. Lane, of Jasper; S. G. Griswold, of New Haven.

Recording Secretaries.—Drs. J. H. Thompson, of Kansas City; N. M. Baskett, of Moberly.

Corresponding Secretary.—Dr. F. J. Lutz, of St. Louis.

Treasurer.—Dr. C. A. Thompson, of Jefferson City.

After reading several papers by title, and referring them to the Committee on Publication, the Association adjourned to meet in St. Joseph, on the second Tuesday in May, 1885.

THE NEBRASKA STATE MEDICAL SOCIETY.

Sixteenth Annual Meeting, held in Omaha, May 13 and 14, 1884.

(Specially reported for THE MEDICAL NEWS.)

THE sixteenth annual meeting of the Nebraska State Medical Society was called to order in Falconer's Hall, Omaha, May 13, 1884, at 10 A.M., by the Secretary, Dr. A. S. Mansfelde, as neither the President nor either of the Vice-Presidents was present. On motion, Dr. Shipman, of Sterling, was elected Chairman. The Society at its last meeting consisted of one hundred and thirty members; this number has been increased by the election of forty-five applicants.

THE REPORT OF THE SECRETARY

was then read. In it he suggested the advisability of his being authorized to collect, by means of suitable blanks distributed to the members, statistics of births, deaths, prevailing diseases, etc. This suggestion was subsequently embodied in a resolution and adopted.

THE COMMITTEE ON FOREIGN CORRESPONDENCE

suggested a plan, similar to the governmental consular system, for the appointment of members of foreign societies as representatives of this Society, and inviting the foreign societies to delegate members of this Society to represent them in its proceedings, to the end that knowledge of the advances in medical science be the more readily and thoroughly disseminated.

THE REPORT OF THE CORRESPONDING SECRETARY

recited a list of the reports received from other State Societies, and recommended the reprinting of the first ten years' *Proceedings* of this Society, the editions of which are exhausted.

THE REPORT OF THE TREASURER

showed a balance in the treasury amounting to $364.20.

At 2 P.M. the Society met in Scientific Session. The first paper read was that of DR. MERRIAM on

RECENT PROGRESS IN THE TREATMENT OF DIPHTHERIA,

in which he took the ground that the greatest progress made had been in the growing disposition to use small doses, frequently repeated, of the tonic and stimulant medicines usually given.

This paper excited much discussion, participated in by many of various views, though most agreed in the number and quantity of remedies used.

DR. BAUER, of St. Louis, Mo., lauded the use of eucalyptol locally.

DR. CARTER presented the report of the Section on

PRACTICAL MEDICINE, PATHOLOGY, AND SPECIAL THERAPEUTICS,

and, in alluding to ethics, said that "while they are outwardly strict adherents to the Old Code, the physicians of Omaha really go beyond the New Code, practising on the principle 'every man for himself.'" This remark called forth indignant denial, and, on motion, was stricken out.

AMENDMENTS TO THE CONSTITUTION

were adopted, as follows:

The deliberations of this Society shall be according to Roberts's Rules of Order.

All officers shall be elected for one year, except the Secretary, whose term of office shall continue until he resigns or is removed.

The chairmen of sections shall be selected by a committee of three, appointed by the President at the beginning of each annual meeting; and each chairman shall, before appointment, promise to report an epitome of the progress made in the preceding year in his section.

QUALIFICATIONS FOR MEMBERSHIP.

DR. W. M. STONE moved that there be required from candidates for membership of this Society the same qualifications as are demanded by the Illinois State Board of Health. Adopted.

Reports from the various standing committees were read and accepted.

THE ELECTION OF OFFICERS

for the ensuing year resulted as follows:

President.—Dr. F. G. Fuller, of Lincoln.

Vice-Presidents.—Drs. G. N. Peebles, of David City, and M. J. Gahan, of Grand Island.

Permanent Secretary.—Dr. A. S. Mansfelde, of Ashland.

Corresponding Secretary.—Dr. R. R. Livingston, of Plattsmouth.

Treasurer.—Dr. R. C. Moore, of Omaha.

Grand Island was selected as the place for holding the *next annual meeting.*

MAY 14TH—SECOND DAY.

THE REPORT OF THE SECTION ON SURGERY

was presented by DR. LIVINGSTON, CHAIRMAN, and contained papers by several members on various topics and a *résumé* of the advances in the surgery of organs formerly sacred from invasion by the surgeon's knife; the surgery of the heart, lungs, œsophagus, stomach, pylorus, kidneys, spleen, liver, and intestines. It also referred to the administration of anæsthetics *per rectum.*

In the discussion that followed, DR. MERCER related four cases of *Stricture of the Œsophagus,* and expressed his preference for dilatation over operative procedures.

THE REPORT OF THE SECTION ON OBSTETRICS,

by DR. ROBBINS, CHAIRMAN, was an account of the discoveries and inventions in that department.

DR. LEISENRING read a paper on *Puerperal Fever*, which was followed by a discussion between those who hold that it is a specific disease developed from a specific poison, and those who believe it may originate from the absorption of any septic matter.

DR. MANSFELDE reported four cases of

OVARIOTOMY,

in which the most elaborate antiseptic measures were employed. Three of the cases were successful. The other one, an unpromising case, died on the second day after the operation.

DR. CHAPIN read a paper on *Medical Education*, in which he assailed vigorously the allo-homœo-eclectic department of the State University.

Other reports, for lack of time, were read by title and referred to the Committee on Publication.

In the early evening a session was held for the inauguration of the newly elected officers and the customary speech-making. After a resolution of thanks to the outgoing officers, the Society adjourned *sine die*.

At the Millard Hotel, at 10 P.M.,

A RECEPTION AND BANQUET

was tendered the members of the State Society by the Omaha Medical Society.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 15, 1884.

THE VICE-PRESIDENT, HORACE T. HANKS, M.D., IN THE CHAIR.

DR. D. BRYSON DELAVAN read a paper on

PRACTICAL SUGGESTIONS UPON THE ALIMENTATION OF PATIENTS SUFFERING FROM DYSPHAGIA.

(See page 663.)

DR. JOHN C. PETERS said that in regard to the admirable method of artificial alimentation described by Dr. Delavan there could be very little to add, as he had set the whole matter so clearly before the Academy. He thought it would be a mistake to resort to it, however, in many cases of the acute affections referred to in the paper. He had found in some cases of diphtheria and other diseases especially implicating the throat (and he had to confess that it had been somewhat a matter of surprise to him) that food and stimulus were not so essential to a favorable issue as was generally supposed. He found sometimes, therefore, that at the present day the profession had gone too far to the opposite extreme of the practice observed in former times, when, as was now commonly said, the patients were "starved to death." He felt convinced that medical men now resorted to over-feeding and over-stimulation; and he said that in many cases of disease he did not think the treatment as judicious as that of forty years ago.

DR. E. C. HARWOOD thought that the paper was one of great interest and practical value, and that the method described in it was a very simple and efficient one. In some of the kinds of cases referred to by Dr. Delavan, he had himself at times employed the Davidson syringe with a small tube, and found that it had answered a good purpose. In some of the cases of acute disease, however, he thought the difficulty of swallowing could sometimes be relieved without having to resort to the use of the œsophageal tube. He then mentioned a very bad case of tonsillitis, with marked dysphagia, occurring in the practice of another Fellow of the Academy, which he was hastily summoned to see in consultation late one night. Not knowing the nature of the case, but learning that it was prominently characterized by throat obstruction, he went prepared to perform tracheotomy. On reaching the patient's bedside, he found the case of the character mentioned, and as the other physician had not yet arrived, he concluded to try the effect of thoroughly cleansing out the pharynx and nasal passages with warm water and salt. This he accomplished by means of a post-nasal syringe of his own device, and the patient, having got rid of a large accumulation of ropy mucus, was so much relieved that he was at once able to swallow with avidity a bowl of beef-tea. The effect of this was very invigorating, and the urgency of the symptoms was now so far mitigated that it was unnecessary to resort to tracheotomy or other severe measure.

DR. BRANDEIS, while agreeing in the main with the views of the author, said that he knew of but few patients to whom he would feel willing to trust the use of the apparatus in their own hands, feeling afraid that the mucous membrane might be lacerated, or the diseased parts seriously injured in the endeavor to pass the tube. But, granting that it could be trusted to some adult patients, it certainly could not to children, and it seemed to him an objection to the method that it would require such constant attendance on the part of the physician, since the feeding would have to be repeated at comparatively frequent intervals.

Dr. Krishaber, of Paris, had proposed, in the case of permanent stricture of the œsophagus, to introduce a tube through the nose and pharynx into the œsophagus, past the point of stricture, and leave it there indefinitely, and one case had been reported in which the tube remained in position for one hundred and fifteen consecutive days. This plan, he thought, could be adopted with advantage in many of the cases to which Dr. Delavan had referred. There was, at present, under his own care a case of undoubted stricture of the œsophagus in a man forty-five years of age, which was associated with cretaceous degeneration of the thyroid and accompanied by difficulty of deglutition; and a catheter had now been *in situ* for the greater part of four weeks. Every two or three days the patient would come to his office, when he would withdraw the tube, and, after allowing the parts to rest for an hour or two, introduce a new one. He employed an ordinary black rubber tube about eight or nine millimetres in diameter. In acute affections, such as quinsy sore throat, he had not met with much difficulty in getting patients to take soft and bland food, and under the circumstances there was, perhaps, nothing so good as a raw egg. This he directed the patient to place in a wine-glass with a little sherry, or whatever else was preferred to flavor it with, and drink it down at one gulp. The whole cavity of the pharynx was thus bathed with a bland substance, which itself was of service in allaying pain and irritation. In acute tonsillitis, if there was no apparent danger from diph-

theria or other septic influence, he was also in the habit of making simple scarifications over the organs, which relieved the dysphagia in a very prompt manner.

DR. GEORGE L. PEABODY said that it had occurred to him to suggest the use of one other device in this connection, and that was an ordinary condom with the end cut off. A portion of this the patient could swallow himself after it had been moistened, and we would then at once have a tube in position for the introduction of as much food into the stomach as was deemed necessary. He had not as yet had an opportunity of carrying this suggestion into practical effect.

DR. W. C. JARVIS said that the method set forth by Dr. Delavan seemed to him to fulfil every indication in which it was possible to use this form of apparatus; but there were certain conditions which we were liable to meet with in which the epiglottis was the special seat of ulceration (as was sometimes the case in syphilis and laryngeal phthisis), and in which it was altogether out of the question to use any kind of œsophageal tube, on account of the extreme pain which it would occasion. In this class of cases he had been of late using, with very successful results, the soft capsules prepared by druggists for the administration of castor oil and other disagreeable medicines, which could be swallowed without difficulty even by such patients. The capsules were filled with the desired fluid food, or stimulus, by means of a hypodermatic needle attached to a tube, and the small orifice was then sealed up. He could speak of this method with confidence, because he had already given it quite an extensive trial. In regard to cases of tonsillitis, such as the one referred to by Dr. Harwood, in which death was threatened from suffocation, he would like to remark that when he met with them he did not hesitate for an instant to excise the tonsil, which could always be done without difficulty, and which usually obviated the necessity of tracheotomy.

DR. DELAVAN, in closing the discussion, said, with reference to the criticism of Dr. Brandeis, that patients ought not to be trusted with the apparatus themselves, that he would not think of doing this in any case in which the patient was not a person of intelligence and judgment; but it required only a little skill and practice to introduce successfully the tube, and he thought that patients, as a rule, when they were once accustomed to it, preferred to pass it for themselves rather than have it done by the physician. When the patient was not capable of doing this, or preferred not to pass it himself, he could not see why a trained nurse could not be employed, who, with a little special instruction and practice, could probably do it as well as the physician himself. But, if in any case the physician felt that it would be unsafe to entrust the procedure to other hands, or if no efficient person could be procured, it was plainly his duty to go and feed the patient as often as was necessary, just as in another case it might be his duty to give a hypodermatic injection of morphia, for instance, two or three times a day. As to Krishaber's method, it was especially adapted for stenosis of the œsophagus, and he did not think its employment would be satisfactory in the class of cases referred to in the paper. In tonsillitis there was often a very marked degree of dysphagia; and here the tube could be used with little difficulty and with very satisfactory results. Dr. Jarvis's suggestion in regard to the use of soft capsules, he thought a capital one; and he was extremely glad to have heard it, because it just met the difficulty in the class of cases referred to, in which there was special sensitiveness in the vicinity of the epiglottis, and therefore admirably supplemented the use of the apparatus to which he had called attention this evening, in the alimentation of patients suffering from dysphagia.

DR. ROBERT W. TAYLOR then read a paper on

CHANCRE OF THE TONSIL.

Having explained that the lesion of the tonsil of which he wished to speak was true chancre alone (to the exclusion of chancroid), he stated that it was not so rare as had hitherto been supposed. As to its origin, chancre of the tonsil might be due to kissing, the contact of pencils, glasses, bottles, and perhaps, cigars, with the mucous membrane of the mouth, and also to depraved and unnatural sexual contact, which, he regretted to say, had become alarmingly frequent in the community. In November, 1882, he was asked by Dr. Charles McBurney, to come to Bellevue Hospital, to see a boy nine years of age, in his wards, who was suffering from a fracture of the tibia, and who, since he had been under treatment at the hospital, had developed a well-marked attack of acute secondary syphilis, with undeniable chancre of the tonsil. Dr. Taylor then read the full history of the case as detailed by the House-surgeon at Bellevue; from which it appeared that the syphilide (roseola), the true nature of which was not immediately recognized, was first noticed on the boy's chest on the 12th of November. On the 15th, the chancre was discovered on the left tonsil, and anti-syphilitic treatment was commenced. The tonsil was swollen and covered with a white membrane, and the cervical glands in the vicinity were much enlarged. The boy confessed that a short time previously a strange man had placed his penis in his mouth in a water-closet.

In June, 1882, a young woman of promiscuous habits, who was under his care at the time for other troubles, complained to Dr. Taylor that she had a slight sore-throat. On making an examination, he found that the left tonsil (both tonsils were chronically enlarged) was somewhat red, though it was not hard, and the ganglia were not perceptibly enlarged. Under the circumstances, he ordered a simple gargle, and awaited events. The patient then went out of town for nearly a fortnight, and when she returned, he found the left tonsil was much swollen and indurated, while the ganglia were enlarged and matted together. Three weeks later, the inguinal glands became implicated, and a roseolous syphilide appeared. The chancre on the tonsil was found to have originated from unnatural practices.

Dr. Taylor next referred to four other cases which he had either seen himself or which had come within his immediate knowledge. The first he had had an opportunity of seeing through the courtesy of Dr. George H. Fox, and it was in a man who exhibited the most disgusting depravity in speaking of the practices to which he was addicted, and through which he became infected with chancre of the tonsil. The second was that of a young man who had a chancre of the left tonsil, and at the time was suffering from a tubercular syphilide. The third case was one of great interest, for the history of which he was indebted to Dr. Edward Wigglesworth, of Boston. It occurred in a medical

student who contracted chancre of the right tonsil while placing his mouth in contact with that of an asphyxiated newly born infant, whom he was endeavoring to resuscitate, which was followed by well-marked constitutional syphilis. The fourth and last case, originating from indulgence in beastly practices, was related to Dr. Taylor with great minuteness by the late Dr. F. J. Bumstead, so that he could thus present six well-authenticated cases of chancre of the tonsils, all of which were followed by constitutional syphilis, and from all of which all other sources of infection were eliminated. The other cases that had thus far been reported were two by a Russian writer, one by Spillman, and four occurring under the observation of Fournier.

Dr. Taylor then spoke of the clinical history of chancre of the tonsil. The first appearances were redness and swelling, without perceptible adenitis. The severity of the symptoms then increased, and induration and ulceration were noticed, while a grayish-white coating might be irregularly spread over the ulceration. The differential diagnosis had to be made between chancre on the one hand, and mucous patches, syphilitic sclerosis, or epithelial cancer on the other. In the syphilitic lesions referred to, the trouble would not be so completely confined to one side, and there would be by no means such marked adenopathy, while the history would, as a rule, throw light on the matter.

In conclusion, Dr. Taylor said that the following points would render the diagnosis of chancre of the tonsil practically certain. First, the details of infection, whether from kissing, from contact of such articles as had been referred to, or from indulgence in bestial practices. Second, the slow, insidious development of the lesion, which runs a subacute course. Third, its unilateral position. Fourth, difficulty of deglutition, and even pain, referred to one side. Fifth, the special implication of the preauricular gland. Sixth, much less induration of the glands in general—particularly those at a distance from the throat—than is usually met with in connection with ordinary chancre.

DR. F. N. OTIS said that he had never himself observed a case of chancre of the tonsil, but that he saw no reason why the lesion should not occur in this position as well as elsewhere. All that was required for the development of a chancre was, first, a *contagium*, and, second, an open surface on the part of the patient affected. He believed, however, that there was a very great variety in the initial lesions of syphilis, the appearances and developments often differing very widely in different instances. All the diagnostic points referred to by the author of the paper might not be present in certain instances, and, therefore, if we were to wait for them to make their appearance, we might lose the opportunity of locating the initial lesion. The latter was not necessarily associated with any destruction of tissue whatever. In some cases he had observed simply a little hard nodule on the genitals; but from this followed glandular enlargement, with the dissemination of the syphilitic virus throughout the system. Such nodules might be absorbed without undergoing any ulcerative process whatever, but, none the less on this account, they are just as much the true initial lesions of syphilis as typical Hunterian chancres. Dr. Otis then related a case which had been referred to him, and which previously had been under the care of two distinguished oculists, in which there was at first merely a little red point on the conjunctiva. From this there was a gradual extrusion of conjunctivitis; but after the patient had been under treatment for several months for the condition of the eye, it was noticed that there had occurred a considerable enlargement of the parotid gland, the lymphatics above it, and the post-cervical glands. During the fourth month after the trouble in the eye commenced, a roseolous eruption appeared, and the case was referred to Dr. Otis, who found it an unmistakable one of constitutional syphilis. The interest of the case centred in the fact that the starting-point of the whole trouble was the little red spot on the conjunctiva, as a careful investigation of the history established the fact that this was undoubtedly the initial lesion of syphilis. It showed, therefore, that we could not always depend on the presence of the usual diagnostic signs in the initial lesions. The cases which Dr. Taylor had reported were worthy of note from a moral and social point of view, but otherwise they did not seem to him to possess any special interest.

DR. F. R. STURGIS said that he had seen four instances of chancre of the tonsils. The first was the one occurring in the boy at Bellevue Hospital, which had been described in the paper. Of the others, one occurred in a man, and two in women. The inflammatory attack was quite well marked, except in one case, in which all the symptoms were of a subacute character. In this the ulceration was quite superficial, but in the others it was well marked. The most important point in the diagnosis, he thought, was the ulceration of the preauricular and postauricular glands, and particularly of the former. This was a prominent characteristic in all the cases that he had seen. As regards the history, it was manifestly impossible to get a correct account of the origin of the trouble in the case of the women. The boy had been sufficiently frank to tell the story. He did not think chancre of the tonsil at all a common condition, and as it might be mistaken for other troubles, it was well to make the differential diagnosis as clear as possible. Between this initial lesion and gummatous infiltration of the tonsil there was a strong similarity; but the main point of difference would be found in the condition of the glands.

DR. L. DUNCAN BULKLEY thought that one of the most important points of the paper, which he regarded as of exceedingly great practical interest, was that it called public attention to another place in which the initial lesion of syphils was liable to occur. It had not been long since syphilis had been regarded as exclusively a venereal disease; so that to be affected with it was always a matter of reproach. Now, however, this was no longer the case, since we were beginning to learn in how many different ways the poison of syphilis might enter the system. Such a paper as this was, therefore, of great practical importance, as indicating to the general practitioner a source of danger in a situation in which he would probably not otherwise have thought of looking for it. As far as he could remember, he thought that he also had seen four cases of chancre of the tonsil. One was a particularly striking and touching case, occurring in a lady, who became affected with a papular syphilide without her family physician suspecting the nature of the trouble. She was thirty-two years of age, and of unblemished character. She was en-

gaged to be married to a man in the town in Connecticut where she resided, and it was undoubtedly from kissing him that the disease had been contracted. When seen by Dr. Bulkley in October, 1876, there was a well-marked chancre of the tonsil, with enlarged ganglia, and she stated that the tonsil first became affected in the preceding August. Subsequently the case proved to be one of the very worst that he had ever met with in all his experience with syphilis, disfiguring its unfortunate victim for life. Not long afterwards he was treating a lady for syphilis, who had been recently married, and it came to his knowledge that her husband was the very man who had given the first lady syphilis, the engagement having been broken off in consequence of this. During the present year the man himself had been under his care, suffering from very severe bone syphilis; and altogether he considered this one of the most interesting groups of cases that he had ever met with.

Dr. W. C. Jarvis said that he thought there was more dread of chancre occurring in the mouth than there was any necessity for, since the parts were constantly bathed with a stream of mucus and saliva all the time pouring through the œsophagus into the stomach, and thus preventing a lodgement of the virus. This was undoubtedly the reason why chancre of the tonsil was so rarely met with.

Dr. Taylor said, in reply to Dr. Otis, that he was well acquainted with the varieties in the appearances often presented by chancre in different parts of the body; but in the tonsils he did not believe that there was the same variation as in most other locations. The peculiar formation of this organ seemed to him to render a certain amount of hyperæmia and thickening inevitable when it became the seat of syphilitic infection. But even if the true nature of the trouble were not immediately recognized, much harm would not result to the patient, since it was now generally accepted that the right time to begin antisyphilitic treatment was when the outbreak of secondary symptoms occurred. He agreed with Dr. Sturgis that the intensity of the symptoms occurring in connection with chancre of the tonsil varied in different instances, and that the cardinal point in differentiating this from gummatous infiltration was the condition of the glands. This, taken in connection with the history and the concomitant conditions present, would leave little room for uncertainity. In regard to Dr. Jarvis's criticism, he would say that, in spite of the washing of mucus and saliva, the crypt-like follicles occasionally detained the syphilitic virus until infection had been accomplished. Hence it was well to be on the watch for its possible occurrence.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, May 27, 1882.

The President, R. F. Weir, M.D., in the Chair.

Dr. C. T. Poore read a paper on

OSTEOTOMY FOR ANKYLOSIS AT THE HIP-JOINT.

(See page 666.)

Dr. A. C. Post said that the case referred to by Dr. Poore in his paper was that of a young man upon whom he operated many years ago in the New York Hospital for ankylosis following morbus coxarius, which occurred in childhood. He divided the bone and brought the limb down into a good position, and the case seemed to promise well, but within one or two days after the operation the limb became enormously swollen, discolored, and the patient died of gangrene. The operation was performed below the lesser trochanter, and at the autopsy it was found that the gangrene was caused by the hooking of the femoral vessels over the projecting part of the upper segment of bone.

The President remarked that gangrene after osteotomy at the lower end of the femur had occurred in two cases within the last two years.

Dr. J. C. Hutchison thought that removal of a wedge-shaped piece of bone was unnecessary, because the osteotome itself makes a wedge-shaped opening, and when the bone is straightened the opening is closed, and in the operations which he had performed he had found it quite sufficient. He thought that the methods adopted and advised by Dr. Poore were such as were usually approved of by surgeons of the present day. In ankylosis of rheumatic origin, the head and neck of the bone being intact, Adams's operation (through the neck) should be performed, because being nearest the centre of motion, the formation of a movable joint here allows more freedom in the movements of the limb. If, however, the rheumatic arthritis is attended with large nodular deposits of new bone around the neck, this operation is inappropriate. The advantages of the operation below the trochanter (Gant's) had been well stated by Dr. Poore, and he thought that all surgeons would agree with the author of the paper that this operation was preferable in strumous cases, in which there is more or less destruction of the head of the bone, and a large proportion of cases requiring operation belong to that class.

He had divided the upper end of the femur three times. On one patient both bones were divided simultaneously, and the patient was subsequently treated by simple extension with a weight and pulley. This patient was shown to the Society. In the other case the patient was kept in bed for two weeks only, and extension was made by the weight and pulley. At the end of this time, when the immediate effects of the operation had subsided, he was put upon crutches, the sound limb being elongated by a high shoe, so as to suspend the diseased limb and allow it to make extension by its own weight, and also to be moved at the point of section, with the view of obtaining a false joint, using the weight and pulley at night. Union, however, took place in this case. The advantages of this method were that the patient was vastly more comfortable, while the weight of the suspended limb gave all the extension necessary, and an artificial joint is more likely to be formed, if this is desirable, than if the patient is kept in bed longer. Dr. Poore was to be congratulated in being able to overcome adduction without resorting to myotomy.

Dr. Poore remarked that the only two cases in which a false joint had remained for much length of time were those reported by Barton, in which motion continued for six years, and the case reported by Dr. Sands, in which motion continued for two years. Dr. Walton, of Pittsburg, in one case divided the bone, as did Dr. Sayre, between the trochanters, and the same history followed, that is, motion for a time, and then an abscess

would form, and the patient would be worse. After recovering from this somewhat, he would begin with passive motion, and the last record was that the bone at the point of motion was becoming ankylosed. There was no case on record, so far as he had been able to find, in which a permanent false joint had been formed. Dr. Poore thought the fatal cases, as a rule, followed section of the bone after ankylosis from hip-joint disease. At least this had been the fact within the last twelve years. Previous to that date the operations were done through a very large wound, and he thought that those cases should hardly enter into the statistics.

NEWS ITEMS.

WASHINGTON.

(From our Special Correspondent.)

HEALTH MATTERS IN CONGRESS.—Mr. Riggs, from the Committee on Public Health, reported back, with an adverse recommendation, House Bill No. 2885, to amend an Act entitled "An Act to prevent the introduction of infectious and contagious diseases into the United States, and to establish a National Board of Health," which was laid on the table, and the accompanying report ordered to be printed. Mr. Riggs stated that he was instructed by the Committee to report the following resolution, with the recommendation that it be referred to the Committee on Appropriations, and it was so referred:

Resolved, That the Committee on Appropriations of this House be, and they are hereby instructed to include in the sundry civil appropriations for the year ending June 30, 1885, the following items:

"For the Contingent Epidemic Fund, to be at the disposal of the President, and to be expended at his discretion, the sum of $200,000, including the unexpended balance of previous appropriations, amounting to $115,000.

"For the support of the National Board of Health, the following sums:

"For pay and expenses of the members of the Board, and for the investigation of questions affecting the public health, including the study of other diseases than smallpox, cholera, and yellow fever, $18,000.

"For rent, fuel, postage, telegraphing, printing, and all other miscellaneous expenses, $2500.

"For disbursing agents, clerks, and messenger, $4500, amounting in the aggregate to $25,000."

The effect of this action, if agreed to by the House and approved by the Senate, will be to leave U. S. quarantine matters in the hands of the Marine-Hospital Service, where it naturally belongs, and give the Board something to do in the way of miscellaneous investigations into the causes of disease and kindred subjects.

BERLIN.

(From our Special Correspondent.)

THE KOCH FESTIVAL.—The banquet of welcome given to Dr. Koch and his companions in recognition of their distinguished achievements and their return from Egypt and India, took place on May 13, in the spacious Winter-Gardens of the Central Hôtel. About six hundred physicians, civil as well as military, professors, State physicians and practitioners, gathered around the long row of tables. The assembly was also honored by the presence of Mrs. Koch and her daughter, who watched the proceedings from the balcony, surrounded by the ladies of distinguished members of the Committee.

The members of the Commission, Dr. Koch and Staff-surgeons Gaffky (Prussian Army) and Fischer (German Navy), wore the high war decorations conferred upon them by the Emperor, which the German Crown Prince had personally presented to them on the third day after their arrival. It is a remarkable fact, that the decorations were then for the first time given to medical men on the black ribbon, which has been heretofore reserved for active combatant officers, and further, that the Emperor himself, the day before his intended departure for Wiesbaden, received the Commission in ceremonial audience. Therefore, Professor Dubois-Reymond, who at the banquet had the honor of proposing the health of His Majesty, was right in laying stress upon the Emperor's lively and active interest in the development of art and science, adding that the peaceful era of the united Empire could not be better inaugurated than by remarkable deeds in this direction.

Prof. v. Bergmann, as President of the Committee, proposed the health of the Commission. It was not the peerless gallantry and self-devotion he wanted to praise—virtues as well exhibited by those who once undertook to study the typhus fever in Silesia, as by those who dissected plague-corpses in the mouldy huts of Wetliauka—virtues common to the profession. It was not more the momentary success which merited the highest praise in our science. "What we want to acknowledge to-day is your mode and manner of working, your undaunted assiduity, your unparalleled painstaking diligence, and last but not least, your scientific methods, cautious, critical, severe against yourself and your pupils." Surgery in particular, he said, was under obligations of gratitude to a man who, in antiseptics, had finished the work of Lister, like Harvey finished the discovery of Ambroise Paré.

DR. CONRAD KUESTER then, in the name of the practising physicians of the metropolis, welcomed the Commission and dwelt upon the practical consequences of their discovery; he went perhaps a little too far in assuming that in the future the work of the physician might be exclusively prophylactic. PROF. VIRCHOW, therefore, could not avoid warning his auditors against drawing too precipitately practical conclusions; but from a merely scientific point of view, he thought it well worth mentioning that the discoverers of the bacilli of cholera and tuberculosis had reconquered for the physician (the old master of all sciences belonging to "physics") a vast territory, which for a long time had been usurped by the botanist. He further dwelt upon the extraordinary and well-merited honors conferred upon the Commission, honors which he claimed were reflected upon the whole profession and which, he thought, were calculated to raise its authority as well as its self-esteem. In conclusion, he mentioned in a most spirited and humorous way his first meeting with Dr. Koch, who then was still a "Kreisphysicus" in a small country town (Wollstein).

After the reading of addresses from the "Gesellschaft für öffentliche Gesundheitspflege," and the "Verein für innere Medicin," by Professors Hirsch and Leyden,

ROBERT KOCH rose to make a reply. He did not find anything extraordinary, he said, in the whole enterprise for a man who, like himself, during twelve years was accustomed to deal with the germs of all kinds of infectious diseases, although the death of Dr. Thuillier might show that such expeditions were not altogether without danger. He likewise did not find anything extraordinary in the discovery of the cholera bacillus, which, sooner or later, would have been made out from necessity as a ripe fruit of the well-trained and exact *methods*. But he was gratified to find some acknowledgment of the merit in the development of these well-acting methods. He was well aware that his discovery would not contribute very much to the improvement of therapeutics, but he believed that his experiences in Egypt and India would allow him to make some practical propositions concerning the prevention of cholera, and that, perhaps, if only the governments concerned would agree upon his plan, *it might be possible to restrict the disease to its motherland—India*.

Words of such vast significance, on an official occasion, from the lips of a man of Robert Koch's reserve and modesty, deserve our highest attention. Careful readers of the reports sent from Egypt and India will remember a somewhat dark and obviously abbreviated passage about the mode of cholera importation studied in the quarantine harbors. This passage, together with the fact that the third report was not published at all, allows the conclusion that the German government is in possession of most important positive propositions about the effective prevention of cholera importation, which are not yet ripe for publication. The success of such measures would guarantee to our countryman a position among the greatest benefactors of mankind. For such a merit even the extraordinary honor of a public donation (of 135,000 marks) by a legislative Act just sanctioned by the German Diet seems only a poor equivalent.

The series of toasts was concluded by Dr. Lassar, who drank the health of Mrs. Koch, now united with her husband after painful months of sorrow and uncertainty.

LONDON.

(*From our Special Correspondent.*)

THE CLINICAL SOCIETY.—At the last meeting of the Clinical Society MR. WILLIAM ANDERSON read notes of a case of *Pyelo-lithotomy*. The patient was a young man, aged twenty-three, who had suffered for nine months from attacks of pain, in the left lumbar region, and hæmaturia, brought on by physical exertion. The urine was always free from pus and calculi. On admission to the hospital nothing could be detected on physical examination of the bladder or lumbar region. The urine contained blood-corpuscles and crystals of uric acid. After a month, however, tenderness and pain were felt in the left loin, and a local fulness accompanied by an increase in the area of renal dulness. An operation was performed about a month later. The kidney was exposed, with complete antiseptic measures, by an oblique incision parallel with the eleventh rib. A stone was detected in the pelvis of the kidney both by digital examination and acupuncture. This calculus was reached by an incision through the wall of the pelvis without damage to the renal parenchyma. It was seized with a pair of forceps, and after some trouble dislodged and removed. It weighed sixty grains when entire, and consisted mainly of oxalate of lime. Since the operation nearly forty calculi have been expelled. Excluding from present consideration all cases of nephro-lithotomy complicated by the presence of a lumbar sinus or in which an abscess has been previously opened (as in Mr. Morrant Baker's case in 1874), this example may be enumerated as the eighth on record. The operations have been completely successful in seven and followed by a fatal result within twenty-four hours in one, in which the kidney on the affected side was the seat of abscess and the opposite organ was extremely diseased. In no instance did any permanent fistula result, the urine ceasing to drain through the wound after the lapse of an interval ranging from eighteen hours to eighty-one days. The operative procedures differed principally in the treatment of the kidney. In five cases the stone was reached by division of the healthy renal tissues, and in two was removed through an aperture made in the duct. The term pyelo-lithotomy was proposed as a name for the operation now described, to distinguish it from the procedure in which the stone is extracted through a renal incision, and to which the name nephro-lithotomy more properly belongs.

MR. RICKMAN GODLEE did not think there was much danger from hemorrhage when the renal parenchyma was incised.

SIR ANDREW CLARK spoke of the medical interests of the case, and suggested that the diet or nutrition was at fault.

MR. HENRY MORRIS spoke at some length, and also endorsed the opinion that hemorrhage from the renal substance was readily stopped by elastic compression, as Mr. Marcus Beck had pointed out.

DR. FINDLAY read a paper on the sequel to a case of *aortic aneurism involving the ascending part of the arch in a woman aged about forty*. The disease had been attended with regurgitation through the aortic orifice.

MR. GOLDING BIRD read a paper on *hernie en bursæ*, and DR. FREDERICH TAYLOR related a case of foreign body in the larynx removed by laryngotomy. The body was a piece of mutton bone which had remained in the larynx below the glottis for three months.

DR. DE HAVILAND HALL asked how it was that no attempt had been made to remove the piece of mutton bone by means of the laryngeal forceps.

DR. COUPLAND narrated two interesting cases of foreign bodies impacted in the air-passages. One was a case of syphilitic caries of the base of the skull, in a woman who had died suddenly from asphyxia due to a piece of necrosed bone having fallen from the base of the skull into the larynx. A second case was that of a boy who had swallowed, inadvertently, a piece of mutton bone, which choked him and got into the bronchi, where it set up consolidation of the right lower tube of the lung. The bone was expectorated some months later, and the signs of pulmonary disease soon disappeared.

YELLOW FEVER NOTES.—Sanitary Inspector Burgess, U. S. Marine-Hospital Service, stationed at Havana, in

his weekly abstract of bills of health issued at that port for the week ending May 24th, says there have been thirteen deaths from yellow fever during the week. He inspected thirteen vessels, and fumigated three bound to U. S. ports—one, the Spanish bark "Eugenia," bound to Philadelphia, loaded with bones, hair, hoofs, horns, old metal, and old railroad iron, was regarded by him as in a very unsanitary condition, although he fumigated and disinfected the vessel and cargo as far as practicable.

Four vessels were inspected at the Cape Charles quarantine station during the past week, and all found to be in good sanitary condition; they put into Hampton Roads to await orders, and were loaded with sugar.

STATE MEDICAL SOCIETY MEETINGS.—*The Indiana State Medical Society* will hold its annual meeting at Indianapolis, on Tuesday, June 10th.

The Ohio State Medical Society will hold its annual meeting on the same day at Columbus.

The New Jersey State Medical Society holds its one hundred and eighteenth annual meeting at Cape May on June 10th.

The Maine State Medical Association also meets on Tuesday next.

The Massachusetts State Medical Society meets at Boston on Wednesday, June 11th.

The Rhode Island State Medical Society holds its annual meeting on Wednesday, at Providence.

The Michigan State Medical Society holds its nineteenth annual meeting at Grand Rapids on June 11th.

M. PASTEUR ON THE PROPHYLAXIS OF RABIES BY VACCINATION.—At a meeting of the Académie des Sciences on Tuesday last, M. Pasteur read an important communication on Rabies. It contained a detailed account of his experiments, made with the help of his pupils, MM. Rout and Chambellan, in order to arrive at a method of attenuating the virus of rabies. This long looked-for result M. Pasteur believes to be realized. If the virus of rabies be taken from a mad dog, and passed through the tissues of a monkey, and afterwards from monkey to monkey, its virulence is much modified. Dogs, rabbits, and guinea-pigs, inoculated with this modified or attenuated virus do not contract rabies. Neither does inoculation by trephining provoke the disease. The virulence of the virus of rabies is increased when passed from rabbit to rabbit, or from guinea-pig to guinea-pig. This virus, injected into the veins of dogs, provokes a more violent form of rabies than ordinary virus of rabies (*rage des rues*). In order to communicate this excessive virulence to the virus, it must be passed several times through the tissues of a rabbit or a guinea-pig. This is necessary in both cases, either of attenuation, from successive transmissions from monkey to monkey, or in that of the naturally weaker virus of rabies. M. Pasteur concluded by saying that he has succeeded in considerably simplifying vaccination for rabies, and at the same time rendering the animals exempt from illness. In a short time hence, he will communicate to the Académie des Sciences a completed and detailed account of his experiments. M. Pasteur has written to M. Faillères, Minister of Instruction, requesting him to appoint a commission to judge of the value of his experiments. The dogs rendered exempt from rabies by his method of vaccination will be placed at the disposal of its members. M. Faillères has appointed the following as members of the commission: M. Béclard, Dean of the Faculty of Medicine; M. Paul Bert, Membre de l'Institut, and Professor of General Physiology at the Science Faculty; M. Bouley, Membre de l'Institut, and Professor of Comparative Pathology at the Natural History Museum; Dr. Villemin, Clinical Professor at the Military and Medical Pharmaceutical School; Dr. Vulpian, Membre de l'Institut, and Professor of Comparative and Experimental Pathology at the Paris Medical Faculty; M. Tisserand, Conseiller d'Etat, State Director of the Agricultural Department.—*British Medical Journal*, May 24, 1884.

THE ELEVATION OF PROFESSOR FRERICHS TO THE RANK OF A NOBLE, has been received with the highest satisfaction by the Berlin medical press, and the profession at large. When he appeared at the Clinic the day after it had been made known, a very warm ovation awaited him. In acknowledging the compliment, he observed that he was quite aware that the distinction was appreciated not merely on personal grounds as related to himself, but also in relation to the profession of which he was a member. Conferring this rank upon professors is quite a recent occurrence in Prussia, the celebrated surgeon Bernhard von Langenbeck having been the first so honored in recognition of his services in the Danish war. A year later, Ranke, the famous historian, was raised to this rank on his seventieth birthday. So long ago as 1866, Dr. Lauer, the personal medical attendant of the Emperor, was so honored; and last year, at the request of the Crown Prince, the great physicist Helmholtz received the promotion. He commenced life as an anatomist and army surgeon; so that of the five persons who have been thus ennobled, four belong to the medical profession.—*Medical Times and Gazette*, March 29, 1884.

BABY-FARMING IN NEW JERSEY.—The State Board of Health of New Jersey has recently had occasion to investigate cases of sickness and death occurring within a few weeks in an institution known as a Sanitarium, near Hammonton, Atlantic County. It is a place for the reception of foundlings. There have been received since January 15th twenty-five infants, and twenty-three are dead. They were all buried, without certificate of death or undertaker, in a small lot near the house. The person in charge of the house is a female physician, who had not registered under the laws of the State. She claims to be conducting a charitable institution, and her prospectus has the endorsement of many excellent clergymen and laymen. The condition of a part of the premises is not good. All the children were bottle-fed. The case is being investigated by the coroner, and the developments, medical, dietetic, insanitary, moral, etc., are peculiar.

DR. C. C. FITE has recently resigned the secretaryship of the State Board of Health of Tennessee. This step was taken in order to devote his whole time to the practice of his profession.

THE UNIVERSITY OF PENNSYLVANIA.—At a meeting of the Board of Trustees, held on June 3d, Dr. William

Pepper was elected to the Professorship of The Theory and Practice of Medicine, rendered vacant by the resignation of Dr. Alfred Stillé.

VIRCHOW ON TRICHINOSIS. — PROF. VIRCHOW has written to the newspapers to express his opinion that the danger arising from trichinosis in German pork is "infinitely greater" than the peril of an epidemic from the American hog, and that, to be consistent, the Imperial Government, which has forbidden the importation of all sorts of American pork, should not allow swine-rearing in Germany.

PROF. S. D. GROSS.—At a special meeting of the Alumni Association of the Jefferson Medical College the following resolutions were adopted:

Whereas, The Alumni Association of the Jefferson Medical College has learned with feelings of heartfelt sorrow and regret of the death of its honored President, Professor Samuel D. Gross.

Resolved, That in his death the Association has lost its most eminent member—one whose constant endeavor it was to promote the best interests of his Alma Mater, to establish throughout the land her reputation as a great school of medicine, and to unite in a bond of common brotherhood her alumni.

Resolved, That as the most illustrious alumnus of his Alma Mater, he has conferred honor upon his country and his profession as a learned author, a teacher unequalled in his ability to impart instruction, and a practitioner whose comprehensive knowledge and sound judgment distinguished him as the good physician and great surgeon.

Resolved, That he has left an imperishable record of an honorable career, characterized by an indefatigable industry, integrity of purpose, noble ambition, devotion to the elevation of the standard of his profession, and by all that could contribute to greatness of his calling.

Resolved, That, distinguished by those amiable qualities of heart and that genial disposition which endeared him to his fellow-men, we found in him always a kind friend and a wise counsellor.

Resolved, That we tender to the bereaved family our deepest sympathy in the great loss they have sustained.

NOTES AND QUERIES.

BACILLUS TUBERCULOSIS.

To the Editor of THE MEDICAL NEWS.

SIR: As an encouragement to those who are trained in the use of the microscope, but who refrain from employing it in the search for the tubercle bacillus, I write to say that I have succeeded perfectly by the aid of your recent editorial giving Fränkel's method. I had failed after repeated efforts whilst using magenta by the formula advised by Drs. Gradle and Voltmann; not necessarily, however, owing to a defect in their directions. With an excellent objective (Nachet, No. 7), I do not find a condenser essential. The error which the beginner is apt to make is by employing too low a power. With the "aniline water," treated with fuchsine as a staining agent, the colors being taken out by alcohol weakly acidulated with nitric acid, I had the best results. The preparations were kept seven minutes in the staining fluid, which was heated in a test-tube just before using, and ten or more in the alcohol. I did not find restaining essential.

In my experience, a jointed, rod-like fungus, of the same length as Koch's bacillus, and which I have several times seen, is apt to be taken for the true bacillus.

The beginner should have good, prepared specimens of the bacillus for comparison. Such were sent to me by Col. Rion, of this State, and they proved very useful.

Truly yours,

F. PEYRE PORCHER, M.D.

CHARLESTON, May 28, 1884.

TRACHEAL STENOSIS.

To the Editor of THE MEDICAL NEWS.

SIR: THE MEDICAL NEWS for May 17, in its report of the proceedings of the American Laryngological Association, contained a report of a paper which I read, and which was based on three cases of stenosis of the trachea (probably of specific origin), treated by enormous doses of iodide of potassium or sodium, gr. 90 to 480 daily, with gratifying results after ordinarily large doses, gr. 30 to 60 daily, had utterly failed.

Your reporter says, with reference to the first case: Dr. Ingals recommended iodide of potassium *very highly* in this kind of trouble; the patient died, his decease being attributed to asthma, etc.

This places the matter in a wrong light, leaving the reader to suppose that I thought the patient died of asthma, which was not correct; and second, that I *highly* recommended a common remedy for a common disease.

What I really said was that the paper was merely suggestive, illustrating what might be accomplished in *some proper* cases by giving *very large doses* of a remedy which I believe should usually be given in small quantities.

Further, he states: "In the second case this acted so favorably that there had been no return of the severe symptoms *which were at no time urgent*, etc." [The italics are my own.]

This would lead the reader to suppose that it was a trifling case which was but slightly modified by treatment. On the contrary, the patient had been in great distress for many weeks, and for several days before the heroic measures were adopted and for a number of days afterward, he had been in imminent danger. Subsequently his dyspnœa had been relieved as the result of the treatment, and he had been able to resume his work.

Referring to the last, which was the most interesting case of the lot, because in it the progress of the recovery was accurately watched by the laryngoscope, and a perfect cure resulted, your reporter says only this: "In the third case it was necessary to perform tracheotomy." This would lead the reader to suppose that *during ineffectual* treatment the operation became necessary, whereas, the history clearly shows that tracheotomy was done before the large doses (which constituted the interesting feature of the paper) had been given, and that while the remedy was being given according to the method under discussion the obstruction speedily disappeared, although it had previously resisted all ordinary treatment.

If these large doses are recommended in any case, it is important that the remedy should be *largely* diluted and its effects carefully watched.

Very truly yours,

E. FLETCHER INGALS, M.D.

CHICAGO, May 30, 1884.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 27 TO JUNE 2, 1884.

WRIGHT, J. P., *Major and Surgeon.*—Directed to perform, temporarily, in addition to his other duties, those of Medical Director, Department of the Missouri.—*Par. 2, S. O. 107, Headquarters Department of Missouri*, May 28, 1884.

MIDDLETON, PASSMORE, *Captain and Assistant Surgeon.*—Granted leave of absence for one month on surgeon's certificate of disability.—*Par. 2, S. O. 107, Headquarters Department of Missouri*, May 28, 1884.

BAILY, JOS. C., *Major and Surgeon.*—Now on leave of absence, is relieved from duty in Department of Texas, and ordered to report to Commanding General Department of the East for assignment to duty at Fort Monroe, Va., to relieve Lieutenant-Colonel Charles Page, Surgeon, U. S. A., on July 1, 1884, from duty at that station.

LIEUTENANT-COLONEL PAGE, on being relieved by Major Baily, will proceed to Fort Leavenworth, Kansas, and report to Commanding General Department of the Missouri, for assignment to duty as Medical Director of that Department.—*Par. 12, S. O. 125, A. G. O.*, May 29, 1884.

THE MEDICAL NEWS.

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ORIGINAL ARTICLES.

CONGENITAL DEFORMITY OF HAND; COMBINED ECTRODACTYLISM AND SYNDACTYLISM.[1]

BY ALFRED C. POST, M.D.,

VISITING SURGEON TO THE PRESBYTERIAN HOSPITAL, NEW YORK.

NOVEMBER 3, 1883, C. W. J., a healthy and otherwise well-formed young man, twenty years of age, was brought to my clinic with a congenital deformity of his left hand, as seen in the cast herewith presented. There was absence of the index and little fingers, and of the corresponding metacarpal bones. The thumb, the middle, and the ring fingers were well developed, and their movements of flexion and extension were not deficient in force. The two fingers were webbed together throughout their whole length; from the normal position of the commissure, as far down as the middle of the second phalanges, the uniting medium was of moderate thickness, consisting of the dorsal and palmar integument, with loose cellular and adipose tissue. The terminal extremities of the two fingers were joined together immovably throughout their whole thickness, and the middle finger, being considerably longer than the ring finger, was necessarily bent, and could not be straightened. A single, very wide nail covered the dorsal surface of the terminal extremity of the two fingers, having a superficial longitudinal groove to indicate the normal line of separation of the fingers.

The patient being etherized, I performed the following operation. I divided the cutaneous portion of the web with a scalpel, and then divided the nail and the deeper tissues with a cutting bone-forceps. There was a small amount of bony union of the terminal phalanges. After the bleeding had been arrested, I was able to bring the dorsal and palmar integument together on the side of each finger with fine silk sutures, from the position of the normal commissure, about half way down to the ends of the fingers. I wound straps of adhesive plaster around each finger separately, and then secured the two fingers with a roller-bandage to a padded dorsal splint, extending from the ends of the fingers above the middle of the forearm.

November 5.—I removed the splint, and applied fresh strips of adhesive plaster around each finger. I then covered the fingers with lint, secured by a roller-bandage. As the splint was irksome to the patient, I did not, at this time, reapply it.

10th.—The edges of the wound had receded. The cuticle had separated from the cutis. I removed the sutures, and dressed the fingers separately with strips of India-rubber adhesive plaster.

17th.—A portion of the integument of the ring finger has sloughed, and a small portion of the base of the middle phalanx is bare. The middle finger is doing well.

19th.—Directed fingers to be dressed with carbolized vaseline, and reapplied dorsal splint.

December 5.—The middle finger is almost entirely cicatrized. The ring finger is in a much better condition than at the time of the last report, and the healing process is going on favorably.

29th.—The middle finger is healed. The commissure between the middle and ring fingers is entirely healed. The ring finger is nearly cicatrized. The middle finger now projects about twelve millimetres beyond the ring finger.

January 5, 1884.—Cicatrization complete. Splint discontinued.

12th.—Middle finger has become somewhat distorted since it has lost the support of the splint, which was accordingly reapplied to-day.

19th.—The shape of the finger is improved. Continued splint.

Soon after the last date, the patient discontinued his attendance.

The result of the treatment was entirely successful in overcoming the syndactylism; but the middle finger had been so long distorted by its abnormal fusion with the ring finger that it is somewhat doubtful whether it will ever assume its perfect normal configuration.

The combination of ectrodactylism with syndactylism in the case which I have presented is a rather unusual one; but Holmes, in his work on the surgical treatment of the diseases of childhood, gives an illustration of a case resembling it, except that the fusion of the two fingers was not so complete, each of the fingers having a separate nail. The thumb also was more widely separated from the fingers, standing out at right angles with the carpus. Both hands and both feet were affected with syndactylism.

In connection with the case which I have reported, I will present a few facts relating to the two varieties of malformation, which usually occur separately, but which in this patient were combined.

Ectrodactylism is more rare than syndactylism. The deficiency may involve a single finger or the thumb, or several or all the fingers may be wanting, or may be in a state of very imperfect development. It may involve both hands, or may be confined to one. Fort refers to thirty-two cases in which the situation was indicated. Both hands were affected in twenty of these cases, the left hand in eight, and the right in four. In most cases only the fingers were wanting. In five cases the metacarpal bones also were absent. Some of the carpal bones are occasionally wanting. When the thumb and little

[1] Read before the New York Surgical Society, May 27, 1884.

The terms ectrodactylism and syndactylism are derived from the Greek δαχτυλος, a finger, with the prefixes εχτρωσις, abortion, and συν, together.

finger are present, and the other fingers are absent, the hand has been compared with a lobster's claw.

Many cases of congenital absence of the thumb have been reported; in some of these the radius has been absent, or imperfectly developed. The little finger is rarely wanting. Out of thirty-seven cases, the little finger was entirely wanting only in three, and in these the thumb and all the other fingers were absent. In two other cases the distal phalanx of the little finger was wanting.

Partial or entire absence of fingers has occurred in different generations of the same family, as in a remarkable instance reported in the *Edinburgh Medical and Surgical Journal* for 1808, p. 252. As a general rule, when some of the fingers are wanting, those which exist have their full normal mobility and strength.

Syndactylism presents itself in two forms, viz.: congenital and acquired. The congenital form may affect one or both hands; in the majority of cases both are affected. Sometimes the thumb and all the fingers are fused together; sometimes all the fingers without the thumb; any two or three may be joined together. When both hands are affected, different fingers may be involved in the two hands. The deformity is sometimes, but not often, hereditary. It is occasionally, but not usually, complicated with ectrodactylism or other deformities.

Syndactylism may be complete or incomplete. The complete form involves the whole length and thickness of the fingers, which have a common investment of skin, with perhaps a slight furrow indicating the normal line of separation. In the incomplete form, the uniting medium is comparatively thin, consisting of normal and palmar integument, with more or less intervening cellular and adipose tissue. This uniting medium may extend the whole length of the fingers, or only a part of their length; it may be quite narrow or of considerable breadth. It is generally broadest and thinnest toward the distal extremities of the fingers. The fused fingers are usually of normal size and structure. When they are very firmly bound together, they are apt to be smaller than in their normal state. There may be separate nails for the fingers, or a common nail of great breadth may extend over two or more fingers. The coalescence of the fingers may be almost complete, even involving the bony phalanges. The superficial palmar arch has been known to extend below the level of the normal commissure of the fingers. Bernier, of Besançon, reports a case in which a child was born with the thumb and four fingers all confounded, so as to constitute but one body of the full breadth of the hand, and having a single nail at the extremity of the dorsal surface. The five toes were in like manner joined together. Dessaix reports a similar case.

Acquired syndactylism is the result of adhesion of two or more of the fingers by means of cicatricial bands following burns or very severe mechanical injuries. Many cases of syndactylism, whether congenital or acquired, are capable of being cured by a surgical operation. Where the fingers are all fused together in a common mass, as in the cases reported by Bernier and Dessaix, little or no benefit, as to appearance or function, is to be expected from treatment. In those cases of complete fusion in which only two or three fingers are involved, there is a better chance of success from an operation. Velpeau and Verneuil object to an operation where there is bony union. Fort objects to an operation where the fusion does not extend beyond the proximal phalanges, on the ground that in such cases the deformity and functional disturbance are but slight. When the thumb is fused with the index finger, an operation is specially important to the function of the thumb. When all the fingers are joined together by a cutaneous web, their separation is of less importance to function than to appearance, and, even in such cases, serious difficulties are sometimes encountered in the attempt to separate them. The general principles of treatment are the same in congenital and acquired syndactylism.

There is a difference of opinion among surgeons as to the most eligible time for an operation in congenital syndactylism. Chelius recommends waiting until the age of puberty. Nélaton, Maisonneuve, and Chassaignac recommend an early operation. Verneuil prefers the age of three or four years. In acquired syndactylism in children, Verneuil advises a delay of one or two years after the occurrence of the deformity.

Until a comparatively recent period the operations which were performed for the relief of syndactylism, were successful in a very limited degree, except in cases in which the uniting medium was broad and thin. The older surgeons contented themselves with a free division of the uniting medium, and the interposition of lint, bandages, or plasters between the fingers until the wounds were healed. The consequence was the healing by granulation and cicatrization, and the reunion of the lateral surfaces of the fingers with each other to a considerable extent below the normal commissure, and for some time after the healing of the wounds the persistent contraction of the cicatricial tissue caused the newly formed commissures to descend more and more toward the distal extremities of the fingers. In cases in which the uniting medium is thin and broad, this retrocession of the commissures may be prevented by great care in the dressing of the wounds. After incising the web or uniting medium, the edges of the integument of each finger should be closely approximated by strips of adhesive plaster throughout their whole extent, great care being taken to make firm pressure as close as possible to the newly formed commissure, which should be a little higher up than the normal separation of the fingers. The dressings should be frequently repeated, the parts being washed each time with a solution of mercuric bichloride, eight grains to the pint. The growth of granulations should be restrained by the frequent application of nitrate of silver, and the wound should be sprinkled with subnitrate of bismuth. When there is an obstinate disposition to the growth of granulations from the surface between the fingers, in addition to the means which have been mentioned, an elastic band may be applied between the fingers, and its two ends attached before and behind to a bracelet which is worn around the wrist. By this means any required

degree of pressure may be maintained to repress the growth of granulations. In cases in which any considerable difficulty in overcoming the deformity is apprehended, it will be advantageous to establish one interdigital space completely before attempting the establishment of another. In this way pressure can be more advantageously maintained to approximate the edges of the wounds, and a more abundant supply of material can be obtained to close the vacant spaces on the borders of the fingers.

When the uniting medium is very thick and narrow, advantage will be derived from making the incision encroach a little on the dorsal and palmar surfaces of one of the fingers, so as to leave a more ample supply for the other. By this means the edges of the wound on the second finger may be healed by first intention; and although the healing of the other wound will be retarded, there will be no tendency to the reëstablishment of lateral union between the two fingers. The healing of the wound which is left to granulate may be accelerated by skin grafting. Occasional instances of congenital syndactylism have occurred in which there was a small hole through the uniting medium just below the position of the normal commissure, the hole being lined with integument. In such cases after division of the uniting medium from the perforation to the distal extremity, and separate dressing of the fingers, there is no tendency to coalescence, the skin lining the perforation being an effectual barrier to the descent of the commissure. The following case illustrates this condition as well as the coexistence of ectrodactylism and syndactylism. On the 23d of August, 1848, I saw a female child of Mrs. F., two months old. It was the first child of her parents, and was in good health, but deformed as follows: Right hand, thumb and index finger perfect, the other three fingers have each only the first phalynx, and they are all webbed together throughout their whole length. The mother states that when the child was born a cord passed from the little to the ring finger over their truncated extremities, and that this cord was spontaneously ruptured at the age of three weeks, soon after which it disappeared. A little rudimental knob was also over the united ends of the middle and ring fingers. This also dropped off. Left hand, thumb perfect, each of the fingers has but two phalanges, the distal phalanx being deficient. The middle and little fingers each have a small pedunculated knob at the extremity. The index and middle fingers, and the ring and little fingers, are webbed at their distal extremities, but free towards the hand, so that a probe can be passed between them and moved freely. The middle and ring fingers are closely webbed together throughout their entire length, with the exception of a small perforation, barely admitting the passage of a probe, at the level of the normal commissure. The right foot is in its normal position, but the distal phalanx of the great toe is wanting. The left foot at birth presented a slight degree of varus, but, by the persistent manipulations of the mother, the position has been nearly rectified. The toes of the foot are all perfect.

On the 23d of August, I separated the index from the middle finger of the left hand, and the ring from the little finger, bandaging the fingers separately, and on the 11th of September, I separated the middle from the ring finger. The wounds all healed favorably, and the separation of the fingers was complete.

The favorable results of the operation in this class of cases in which there is a perforation between the fingers, have led surgeons to make an artificial perforation where the uniting medium was entire, and to maintain the opening by passing through it a metallic wire and leaving it in place until the circumference was cicatrized. When the web is broad and thin, such perforation is unnecessary. When it is narrow and thick, it is very difficult to secure cicatrization of the margin of the hole, and the attempt gives rise to a considerable amount of irritation. Upon the whole, I am not disposed to regard the method as one of great practical value.

Maisonneuve treated a case of syndactylism by including the uniting medium throughout its entire length between two wedges acted on by screws, so as to make pretty firm pressure, on the principle of Dupuytren's enterotome. It occasioned but little pain or inflammation. The section was complete about the twelfth day, when the fingers were found to be healed. The separation of the fingers was perfect and permanent.

Velpeau treated syndactylism by incising the uniting medium throughout its whole extent, and applying three sutures at the commissure, one in the middle and one on each side. Verneuil modified the practice by applying sutures along the whole lateral surfaces of each finger. Follin, Theguier, Morel Lavallée, and Vidal de Cassis, report successful cases treated in this way.

Fort gives a description of a variety of plastic operations devised by different surgeons for the cure of syndactylism.

The process of Letter is as follows: A triangular flap of dorsal integument with its base at the commissure, and its apex at the articulation of the first and second phalanges, is cut and reversed on the dorsal surface of the hand. The web is then divided throughout its whole length, and the flap is brought down and attached by suture to the palmar integument. Morel Lavallée modified this process by making a palmar flap as well as a dorsal one, truncating their apices, and uniting by suture.

Ths process of Dieffenbach consists in dividing the uniting medium, dissecting the skin from the subjacent parts on the dorsal and palmar surfaces, and then gliding the flaps together and uniting them by sutures on the side of each finger.

The process of Decés consists in forming the commissure from the web. The fingers being separated as widely as possible, the surgeon seizes the web longitudinally between the blades of a dissecting forceps, the points of the forceps corresponding with the normal position of the commissure. An assistant holds the forceps while the surgeon cuts on each side from the free extremity of the web to the commissure, leaving the web attached at the commissure. The fingers are separately dressed, and heal by granulation and cicatrization, while the web sinks and forms

a commissure. Decés had complete success with this plan in a case of syndactylism from the cicatrix of a burn, in a child of eight years. The commissure appeared entirely satisfactory thirty months after the operation.

A very ingenious operation for the cure of syndactylism was devised by the late Dr. J. Kearney Rodgers, of this city. I cannot give the exact date of this operation, and I am not certain whether Dr. Rodgers published an account of it. But I have a record of a case in which I repeated the operation in 1846, and I have a strong impression that Dr. Rodgers had performed the operation many years before that time. The operation consists in making a longitudinal incision on the palmar surface of one finger and on the dorsal surface of the other, and dissecting from the adjacent parts a dorsal and a palmar flap, the palmar flap covering the side of the finger from which the dorsal flap was taken, and the dorsal flap covering the side of the finger from which the palmar flap was taken. In this way the lateral surfaces of the fingers were covered with sound skin, and the wounds left to heal were transferred to the palmar surface of one finger and the dorsal surface of the other.

In the case in which I performed the operation there was partial sloughing of the flaps, troublesome secondary hemorrhage, and a considerable amount of inflammation. The healing process was retarded, and was not completed until about three months after the operation. The fingers were well separated from each other, but their motions were not very free, when the child was taken from the city.

One of my colleagues in the New York Hospital undertook the performance of Dr. Rodgers's operation on an adult patient, but made the singular mistake of making the dorsal and palmar incisions on the same finger, leaving that finger only half covered with integument, while the adjacent one had a superabundant covering. The result was very satisfactory. The wound of the finger which was amply supplied with integument healed very promptly; that of the other finger healed very slowly, but there was no raw surface on the other finger to which it could adhere, and the syndactylism was completely cured.

M. Fort gives an accurate description of Dr. Rodgers's operation, illustrated by woodcuts, but he makes no mention of Dr. Rodgers. He ascribes the operation to M. Didot, of Liege, in Belgium. Didot published an account of the operation in the *Bulletin de l'Acad. de Bruxelles*, in 1850, tom. ix. No. 5. Sedillot says that Didot reported successful cases in 1845. There seems to be no reason to doubt that Dr. Rodgers was the originator of this operation, and that he performed it a number of years before Didot. It does not appear certain whether Didot had become acquainted with Dr. Rodgers's operation. If he had not, it is remarkable that he should have devised an operation agreeing with that of his predecessor in all its minute details.

Nélaton claims to have anticipated Didot in this operation.

In *The Medical Press and Circular* of April 25th, 1866, Barwell describes an operation which he performed with success for the cure of syndactylism. He divided the uniting medium close to the side of one finger, so as to leave ample integument to cover the other finger; and he cut a flap from the side of the gluteal region to cover the denuded side of the first finger, binding the forearm and hand to the body until the flap had united with the finger.

The most valuable collection of facts in relation to ectrodactylism and syndactylism is to be found in a monograph entitled, *Des Difformités Congénitales et Acquises des Doigts, et des Moyens d'y Remédier*, par le Dr. J. A. Fort. Paris, 1869.

A NEW METHOD OF PREPARING EGG-ALBUMEN.

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UP to within very recent years the white-of-egg was considered to be an almost pure egg-albumen; consequently, the old method of Hoppe-Seyler for preparing egg-albumen directs that the white-of-egg be finely cut with a pair of scissors and mixed with an equal volume of water; the mixture is now shaken briskly in a flask until quite frothy, and is then allowed to stand. In a few moments the froth, having adherent the fibres of the fine membranous network of the white-of-egg, will collect on the top of a turbid yellowish fluid. The solution is now strained through linen and filtered, and the filtrate dried at a temperature not above 40° C. Before drying, it can be further purified of most of its salts by dialysis.

Recent researches of Lebonte and Goumœns (*Journ. de Pharm.*, s. 3, xxiv, 17), Sherer, and others, show that the white-of-egg is not a proximate albuminous principle. The former investigators found that dilute or glacial acetic acid gives a decided precipitate with the white-of-egg, while Sherer observed that if a small quantity of dilute acetic acid was added to the solution of the white-of-egg and the liquid largely diluted with water a flocculent precipitate occurred; furthermore, that this precipitate was soluble in a small quantity of potassic nitrate and sodic chloride, and was coagulable. It has since been determined that the body thus precipitated is a globulin, consequently a more recent method of preparing egg-albumen is gradually to add dilute acetic acid as long as a precipitate occurs. The mixture is now filtered and dried, or dialyzed before drying, as in Hoppe-Seyler's method.

Wurtz (*Ann. Chem. Phys.*, 3, xii. p. 27) gives a method which is represented to give pure albumen. The white-of-egg is freed from its membranes as in Hoppe-Seyler's method and filtered, the filtrate is mixed with a small quantity of basic plumbic acetate, which produces an abundant precipitate. The precipitate is washed and is then brought to the consistence of thick paste. CO_2 is passed through, which decomposes the plumbic albuminate, forming plumbic carbonate, which is suspended in the liquid, while the albumen in a free state remains in solution. The solution is filtered through a paper previously washed with dilute acid. The filtrate is treated with a few drops of sulphuric acid and then cautiously heated to 60° C., until it begins to show turbidity; the first

flocks of the albumen precipitated carry down the whole of the plumbic sulphide. The filtrate is perfectly colorless and is evaporated at 40° C., the residue consisting of pure soluble albumen. (*Watt's Dict.*)

The recent method of Hoppe-Seyler (*Phys. und Path. Chem. Analyse*, 1883, p. 270) directs that, after separating the membrane and filtering, the solution is purified by saturation with magnesic sulphate at 20° C., the precipitate is washed by a saturated solution at this temperature; the filtrate is now precipitated by saturation with sodic sulphate at 20° C., the precipitate is collected and repeatedly dissolved in water and reprecipitated by sodic sulphate. The sodic sulphate is now removed from the precipitate by the addition of a large amount of distilled water, and the precipitate then collected and dried at between 40° and 50° C. This gives a tolerably salt-free albumen.

These methods I have entirely superseded for general laboratory purposes by the use of carbonic acid water or the common soda-water of commerce. My method is to free the white-of-egg of its membrane as in Hoppe-Seyler's method, but before filtering to add an equal volume of carbonic acid water. This causes a considerable amount of flocculent precipitate, which settles readily or which can be quickly filtered off. The filtrate is perfectly clear, passes with comparative rapidity, and is slightly alkaline in reaction; it gives no precipitate with dilute or strong acetic acid, or by the further addition of CO_2. Very little of the CO_2 remains in the solution in a free condition, but seems to be combined with the free alkali in the white-of-egg. This solution, which is now free from globulin, can be dried at a temperature of about 40° C., or can be freed beforehand of most of its salts by dialysis. The quantity of carbonic acid water necessary will of course depend upon the amount of gas in solution, and the only rule is to add sufficient to precipitate entirely all of the globulin.

This method of preparation possesses great advantages over the foregoing, inasmuch as the albumen is quickly prepared and in a condition sufficiently pure for general laboratory work; the process is very simple; and there is not the objection of the contamination of so foreign an element as acetic acid. Since the white-of-egg contains alkaline carbonates as natural constituents, and as the CO_2 seems to form such salts, the introduction of the gas can scarcely be considered in any way objectionable.

The carbonic acid water is now readily obtained in siphon bottles at a very nominal cost, is always ready for use, easily handled, and, when added to solutions in proper proportion, immediately saturates them without giving rise to the excessive annoyance experienced in albuminous solutions by the formation of bubbles while passing a stream of gas through them. These advantages in the use of the carbonic acid water over the gas have caused me to substitute it for some time in testing, and I have found it to act most admirably in the precipitation and preparation of various proteids, which I will shortly report. If it is desirable to have the carbonic acid water free from the contaminations of our river waters, *distilled water* can readily be charged with the gas.

A CURIOUS CASE OF PERSISTENT REFLEX SPASM OF THE DIAPHRAGM.

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A CASE which I desire to bring before the notice of the profession was lately sent to me by Dr. L. M. Bingham, of Burlington, Vt., for diagnosis and suggestions as to treatment. Her history was as follows:

Miss E. W. Unmarried. Aged forty-four years. Her father died of cancer, complicated with phthisis, at the age of seventy; her mother died of heart, disease at the age of thirty-five. She has three sisters living, all of whom are "delicate and of a nervous temperament." Two sisters died of Bright's disease. One niece of the patient had chorea of a severe and persistent type.

As a child, the patient was afflicted with "extreme nervousness," but never had any marked symptoms of chorea. She menstruated at thirteen years, but was irregular until she reached the age of thirty years, since which time the menstrual function has been normal. Insomnia became developed as a marked symptom at the age of twenty years. It has persisted ever since; but with varying degrees of intensity. From youth she has been subject to more or less tremor of the hands, and has lately noticed that excitement markedly increased it. The tremor stops during sleep and does not cause her much inconvenience during the day. Neuralgic pains occasionally shoot into the hands and fingers, and are often experienced in the shoulders, back, and left side.

Four years before the date of my examination, she was attacked with *paroxysms of hiccough*. These have persisted throughout the past four years. The attacks come on in paroxysms which last from ten to sixty minutes. They are often so severe as to cause vertigo and symptoms of asphyxia. *They almost invariably follow movements of the upper extremities.* For that reason all manual efforts have been avoided for some years. The sweeping of a room will throw the patient into a severe paroxysm of hiccough. Sewing is rendered impossible for the same reason. Dressing the hair almost invariably induces an attack. Movements of the head, trunk, or legs seem to exert no influence upon the patient of a similar character.

Of late, neuralgic attacks have become more frequent and severe. The eyes have been affected with neuralgic pains of a severe type, and also the shoulder of the left side.

On examination, no loss of muscular power was detected by me in either hand by means of the dynamometer. The condition of her body in respect to sensations of touch, pain, and temperature was tested and found to be normal. No painful points (the puncta dolorosa of Valleix) were detected over the seat of the neuralgic attacks. Pressure made over the spinous processes of the vertebræ produced no pain *except at one point.* This corresponded to the situation of the fourth, fifth, and sixth cervical segments of the spinal cord. Here the patient suffered marked pain on pressure and the skin was markedly hyperæsthesic. The patient stated, in reply to my

interrogations, that this region had been the seat of a continuous "aching sensation" for the past four years. The superficial and deep spinal reflexes were normal. Coördination was performed perfectly in both the upper and lower extremities. The pupils were normal and responded perfectly to light and visual accommodation.

The condition was evidently one of abnormal excitability of the lower cervical segments of the cord, associated with general neurasthenia. The fifth cervical segment gives origin to filaments which enter into the formation of both the brachial plexuses and the phrenic nerves. The phrenic nerves arise from the third and fourth segments as well. The case appears to justify the conclusion (based upon anatomical data), that the activity of the lower cervical segments (necessary to movements of the arms and hands) produced in adjacent segments of the cord an abnormal irritation of the cells associated with the physiological function of the phrenic nerves—hence the diaphragmatic spasm.

The patient was burnt with the benzine cautery apparatus over the cervical and dorsal segments of the cord, and ergot and the bromides were ordered to relieve the local congestion of the cord that probably exists. This treatment had previously been tried for a short time with marked benefit, but had been discontinued when the symptoms exhibited amelioration. The effect of the continued use of the cautery has yet to be determined.

156 MADISON AVENUE, May 18, 1884.

MEDICAL PROGRESS.

POISONED ARROWS.—DR. R. CAMPBELL, Civil Surgeon of Tezpore, has, the *Indian Medical Journal* reports, made some experiments with the poisoned arrows taken from the Aka after the raid at Balipara last November. He feels certain that the poison used is dried aconite-root, pounded and fastened on the arrow's head by a gum. As a rule, the shafts and the heads are separate pieces, so that, in trying to pull the arrow out of the wound, the head is left in. He recommends the hypodermatic injection of liquor ammoniæ, two parts to one of water; and syringing out of the wound with solution of nitrate of silver, forty grains to the ounce, as the most useful treatment.—*British Medical Journal*, April 26, 1884.

NITRITE OF AMYL IN MIGRAINE.—DR. BIANCHI has caused the instantaneous disappearance of this troublesome affection by making the patient inhale three drops of nitrite of amyl placed on a handkerchief. The subject was a woman who suffered from this neurosis at each menstrual epoch. It is well known that nitrite of amyl acts by paralyzing the muscular fibres of the small arteries, and that its action is specially exerted on the cerebral vessels, and that local congestion is the consequence of this congestion.—*Revue de Thérap.*, May 15, 1884.

TREATMENT OF TETANUS.—DR. MARAGLIANO, *à propos* to a case of tetanus cured by isolation and large doses of chloral, draws the following conclusions in an article published in *La Salute*:

1. The patient should be placed in a dark room, which should be noiselessly entered every fifteen minutes in order to give food or drink.

2. The ears should be so stopped that the patient shall have absolute rest, and the floor should be carpeted.

3. Every three or four hours the patient should take some bouillon, an egg, and some white wine.

4. All pain should be calmed by administering belladonna, conium, or chloral, the last being preferable.—*Revue de Thérap.*, May 15, 1884.

ULCERATION OF THE TRACHEA AND OPENING OF THE INNOMINATE BY A TRACHEAL CANULA.—At the meeting of the Société Médicale des Hôpitaux, on April 11, M. D. HEILLY presented the specimens from this case. Tracheotomy had been performed during an attack of croup. The case went on well, with the exception of slight fetor of the wound. After the second day the canula was removed for several hours every day, and on the sixth day was removed altogether. On the eighth day the child was apparently well. On the twelfth day profuse hæmoptysis set in, and death soon followed. At the autopsy it was found that the anterior wall of the trachea had been ulcerated by the stylet of the canula; this also involved the innominate. Deep ulcerations of the trachea after tracheotomy are very rare. Cases of ulceration of the œsophagus have been reported, but opening of the innominate seems to have been observed only twice, by Howse.—*Gaz. Hebdom.*, April 18, 1884.

HYSTERECTOMY FOR FIBROUS TUMOR COMPLICATED BY HYDRONEPHROSIS.—At the meeting of the Société de Chirurgie, on April 2d, M. POZZI reported this case. The patient was a woman, forty-four years of age, who had had a tumor of the uterus for eight years, and for five or six months had had a fluctuating tumor in the right side, which, after an exploratory puncture, was diagnosticated as hydronephrosis. After the puncture hectic symptoms came on, the patient weakened rapidly, and got into a very bad condition. Pozzi punctured the cyst again, and drew off a large amount of purulent fluid. On the next day he performed hysterectomy, and found an enormous uterine fibroma, which he separated by two elastic ligatures, one at the cervix, the other at the broad ligament, whilst a third was applied on the right side of the tumor, where it was adherent to the hydronephrosis cyst. On this side the pedicle was enormous. The pedicle at the broad ligament was left in the abdomen. The hydronephrosis attained its original size in about five weeks, when another puncture, and washing with sublimated water, caused it to disappear entirely.—*Gaz. Hebdom.*, April 18, 1884.

EXTIRPATION OF THE UTERUS THROUGH THE VAGINA.—On March 8th PROF. PERUZZI performed this operation in the hospital at Lugo. The patient was thirty-four years old, and had cancer of the cervix, with supravaginal infiltration. The Billroth operation was performed. On April 18th the patient was doing well.—*Gazz. Med. di Torino*, May 5, 1884.

LAPAROTOMY FOR VOLVULUS.—DR. AMBROSI recently performed this operation successfully at the Monte Giorgio Hospital.—*Gazz. Med. di Torino*, May 5, 1884.

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THE PREVENTIVE INOCULATION OF HYDROPHOBIA.

THE cable has recently brought to this side of the Atlantic the news that M. PASTEUR had discovered, isolated, and cultivated the virus of hydrophobia, and made protective inoculations with it. Immediately, the medical journals repeated this announcement, and the public prints gave it a warm welcome, and spoke of it as a great achievement, full of promise for suffering humanity. Medical men, too, have been interviewed by newspaper reporters, and, on the strength of the meagre and imperfect abstract which the cable had furnished to the daily papers, have expressed an unqualified approval and endorsement of Pasteur's views.

We have delayed our comment until after receipt of the paper of M. Pasteur, read before the Academie de Medécine, May 20. This is now at hand, and demands, we think, a little different handling from what the previous account has received, and of a sort which the possibility of Pasteur being misrepresented in this would have hardly warranted.

The points of M. Pasteur's paper are as follows: The protective power of inoculations with attenuated virus is an established fact. The virus of rabies is attenuated by passing it by successive inoculations through the monkey. It is increased in virulence by similar passage through the rabbit or guinea-pig. In either case it can then be communicated to the dog in its modified state of virulence, either greater or less than original, producing in one case certain death, in the other protection. The plan of action proposed is to take the virus from a rabbit dying after inoculation at a period somewhat longer than the shortest (which he assumes to indicate the greatest virulence), and inoculate this successively in other rabbits, inoculating in the first instance from it, and in turn from each of the series of rabbits, a dog. The effect, Pasteur asserts, will be to render the dog refractory to the rabies which occurs "on the streets," that is, to the natural as contrasted with artificial inoculation.

Pasteur next asserts: "By inoculations of the blood of animals, I have succeeded in simplifying very much the operation of vaccination, and in procuring in the dog the most refractory state." He expresses the hope that he will be able, by the application of his theory, to secure immunity in animals after they have been bitten. Finally, he says he would have been happy to have published this announcement only after his conclusions had been "controlled" by some of his colleagues, but for the lack of sufficient material, and that he has asked the Minister of Public Instruction to appoint a Commission to test the results of his experiments.

The scientific and humanitarian importance of this announcement is very great, and, being coupled with the positive assertion of Pasteur that it furnishes an "infallible" means of preventing and curing hydrophobia, there is no wonder that numberless persons have applied to M. Pasteur and expressed their willingness to be inoculated with the modified virus which causes rabies. But, as the reaction which follows upon the dispelling of an illusion is all the greater the higher the illusion has raised the hopes of mankind, it may be worth while to call the attention of our readers to certain facts which ought not to be out of mind for an instant when weighing the claims of this promising announcement.

In the first place, it ought not to escape the notice of the careful observer that what Pasteur proposes in his paper is not a strict application of his own theory. He claims that passage through monkeys weakens the virus, while passage through rabbits strengthens it; and then he proposes protective inoculations with virus taken from rabbits, which is more virulent, not virus from monkeys, which is attenuated. In the second place, it will be noticed that he does not assert that he has in this way secured immunity against rabies a single time. He says he has *simplified the operation of vaccination by inoculations with the blood of animals*, and so has produced the most refractory state. He has not made, and does not dare to suggest, the application of his theory to the protection of human beings. And for animals he only hopes its application may prove effective to save after a bite has been inflicted. The request for the appointment of a Commission to test the value of his hopes, indicates that M. Pasteur is willing to have it tested, but it would be a mistake to suppose it adds

to its claim upon the acceptance of others *before the test is applied.*

There are other serious flaws in the argument of this paper, but we have not time now to point them out. We pass to some more general considerations as to the position claimed by M. Pasteur and his supporters in relation to this subject.

M. Pasteur has done a great deal to advance the study of what are called disease germs, but he has not had such confirmation of all his assertions as to warrant the acceptance of a strange statement from him before it has been tested and corroborated by others. In a variety of matters he has made extravagant claims of discovery, which have not borne the test of time. In regard to hydrophobia, it is not long since he made an announcement, as positive as this last one, which was very soon shown to be utterly erroneous. Even if this were not the case, one might look with some distrust upon the statements now made in regard to the curious weakening and strengthening of the virulence of the assumed virus of rabies by respective inoculations into rabbits and monkeys. In regard to this matter, the assertions of Pasteur lack the essentials of scientific accuracy. We have not yet been told the reason for calling rabid the dog from which he got the virus he first used. No one but Pasteur has seemed to show that this virus resides where Pasteur says it does—in the brain especially, and with peculiar virulence. On the contrary, as Pasteur does not appear to know, many other parts of the body, solids and fluids, have been inoculated with as great degree of success as he claims for his inoculations with the virus taken from the brain, where he says it can be gathered in "perfect purity." Further, he, and those who follow his lead, find it convenient to ignore utterly the inoculation-experiments of such excellent observers as Hertwig, Wright, Galtier, Paul Bert, and Colin, which show that, whatever it may be which is produced by the inoculations of brain substance, this does not succeed as invariably in the hands of others as it does in those of Pasteur; that, when it does succeed, the result does not differ from what can be effected with many other matters from various parts of a subject supposed to have rabies, or from similar parts of subjects beyond suspicion of it; and that the result is probably a form of septicæmia, not rabies at all.

For a few years Pasteur, whose attention was accidentally attracted to this subject in the Academie de Médecine of Paris, has been experimenting upon it. If he has ever produced what can with security be called rabies by his inoculations, the record of these experiments is wanting. If he has a well-defined idea of what rabies really is, he has never yet made it public. On the contrary, he has formulated in another place a sort of definition which is elastic enough to permit him to affirm anything produced by his inoculations to be what he was after. "Nothing," he has said, "is more varied than the symptoms of hydrophobia. Each case of hydrophobia has, so to speak, its own special ones" (*les siens propres*).

This is not the way to get at a truth so obscure as the nature of hydrophobia. And we think it a duty to warn our readers against too hasty an acceptance of this recently cabled announcement of Pasteur, or too sanguine a trust in the saving grace of a virus attenuated by passage through monkeys. It may be all so; but this newcomer has such a questionable appearance that we may not be accused of being too sceptical if we await the report of the commission appointed to consider the subject.

TUBERCULOSIS OF THE TONSILS.

TWENTY-TWO years ago, Virchow wrote: "The explanation of the fact that tubercle of the tonsils has not been observed, I am unable to give. Possibly it is merely due to want of sufficient examination. Even if tubercle should be found, it must occur so rarely that these organs may be said to possess a sort of immunity." Since that time, tubercle of the tonsils has been many times seen and described as occurring in connection with tuberculosis of the throat and soft palate. But as this affection is relatively rare in these parts as compared with other structures, the dictum of Virchow has been generally received as true. This more or less complete immunity of the tonsils is, from the standpoint of the doctrine of infection, a very remarkable fact. Consisting of a tissue, in which elsewhere tubercular processes develop by preference, situated at the entrance to the organs of respiration and alimentation, and subject constantly to morbid processes of all kinds, the tonsils ought to be peculiarly liable to tuberculosis.

DR. FRITZ STRASSMANN, *Virchow's Archiv*, May 5, 1884, at the suggestion of Cohnheim and Weigert, conducted in the Pathological Institute at Leipsic, last year, a series of investigations with a view to determine the question as to the occurrence of tubercle in these structures. His results are wholly at variance with the views hitherto held.

In bodies showing tuberculous changes, he found tubercle in the tonsils to be extremely common—not less than 13 times in 21 cases. It was present as disseminated miliary deposits of small, or even the smallest, size, and in varying distribution—a single preparation sometimes containing a great number, while sometimes several sections had to be examined before any were encountered. These tubercles are rich in giant-cells, and resemble the deposits found in the lymphatic glands. Somewhat larger caseous masses were also seen, but very seldom. Bacilli occurred in small numbers and the sur-

rounding tissues showed very little change. The condition resembled closely that of the kidneys in urogenital tuberculosis, or in acute general miliary tuberculosis, and was in striking contrast to the spreading caseation and destructive deep ulceration of the tonsils, seen when the tuberculous process invades them from the throat or palate. The affected tonsils were of normal size, or atrophied or hypertrophied as the case might be, but showed no characteristic macroscopic appearances.

Among the 21 cases were 15 of tuberculous disease of the lungs; of these, tuberculosis of the gut was present in 5; of the larynx in 5; of the pleura in 2; of the liver and kidneys in 3; finally, of the tonsils in 13.

In contrast to this group were six cases in which the tuberculosis had not proceeded from the lungs. In two of these—one a case of acute miliary tuberculosis having its origin in caseating bronchial glands, the other of tuberculosis of the suprarenal capsules—the lungs were, it is true, the seat of a recent secondary tuberculosis. In the four others, namely, one case of tuberculosis of the intestine, one of the testicle, and two of the serous membranes, the lungs were wholly free. In none of this second group of six cases was tubercle found in the tonsils.

In so far as the cases observed warrant a conclusion, it may be stated that tubercle of the tonsils is a very frequent accompaniment of tubercular disease of the lungs; and since the former condition was only present in those cases in which infection by means of the sputa could occur, and in none of the others, the probability that such infection is the cause of tonsillar tuberculosis becomes very great. Nothing was found that would in any way sustain the view that tubercle may occur as a primary lesion of the tonsils in consequence of the direct access of the infecting principle to their tissues. The condition described is altogether without clinical significance.

RUPTURE OF THE VAGINA IN ITS MEDICO-LEGAL ASPECTS.

FROM copies of the *Morning Herald*, published at Dunedin, New Zealand, recently received, we learn of the trial of a practitioner named Parry, for having "killed and slain" a woman in labor, and of his conviction with sentence to four months' imprisonment. There seems to have been a most indecent and unjust haste in the judicial proceedings, for the offence with which he was charged was committed on the 28th of March, and Parry was tried, convicted, and sentenced on the 2d of April; and by this haste the voice of popular clamor was echoed rather than the calm utterance of justice. From the scanty evidence found in the paper, we gather that the doctor was called to a woman in labor, and, upon his first examination, ascertained she had a rupture of the vagina, and so stated to one of the women present; he seems to have given the patient chloroform to relieve her suffering, but resorted to no active interference, telling the husband that his wife would die. The two medical men examined for the prosecution, stated that death occurred from hemorrhage caused by the rupture, and that this was from external force. How they could know that external force caused the rupture, we do not understand, for the post-mortem was made a day after the woman's death, and the form of the injury does not indicate its cause. The medical gentlemen who testified for the defence were very modest in their claims, merely stating that the vagina might be ruptured without external violence, and apparently were thus as far wrong one way as those for the prosecution were the other way, but both to the detriment of the prisoner. The evidence ought to have been that vaginal rupture in labor is in almost every case the result of uterine contractions; and generally, too, some tearing of the uterus is associated with the vaginal injury.

We are glad to see that a special meeting of the New Zealand Medical Association was held very promptly, at which it was unanimously resolved "That it is the opinion of the highest obstetrical authorities that nearly all cases of uterine and vaginal rupture depend upon pathological conditions, and have occurred in the most skilful hands." It was also resolved that a petition should be forwarded to the Governor, praying for a commutation of Dr. Parry's sentence. But why did not the Association simply state that the great majority of these injuries were spontaneous and not traumatic? Above all, why was not such evidence introduced at the trial? The judicial proceedings seem to us marked by shameful blundering—the court blundered, the counsel for the defence did not bring in the strongest evidence, the medical witnesses on each side blundered, and finally the jury completed the series of blunders. New Zealand justice proved itself in this case very prompt, but also very blind.

THE RECIPROCAL HEREDITY OF UTERINE MYOMATA AND PROSTATIC HYPERTROPHY.

DR. PAUL J. B. M. JOSSO has brought forward, in the *Gazette Médicale de Nantes*, some interesting statistics apparently showing a reciprocal heredity between uterine myomata and prostatic hypertrophy. He believes that a full study of the subject will perhaps lead to the announcement of this law: Myomatous degeneration of the uterus in the mother predisposes not only her daughters to this affection, but also her sons to prostatic hypertrophy, and, reciprocally, hypertrophy of the prostate in the father predisposes not only his sons to the same disease, but also his daughters to uterine myomata.

Certainly this is an important law if sufficiently numerous observations verify it.

One of the arguments suggested by Dr. Josso is that from embryogeny, and he seems to consider the prostate as the analogue of the uterus. But it is the prostatic utricle, rather than the prostate itself, which some embryologists have regarded as the analogue of the uterus; another argument against the suggested analogy is that the uterus is developed at a very much earlier period of embryonic life than the prostate. However, the question must be decided by clinical observation rather than by the history of intra-uterine formation.

SINCE December 14, 1881, DR. ALEXANDER, of Liverpool, has operated in twenty-one cases of prolapse, or of posterior displacement of the uterus, by shortening the round ligaments. The results have been generally very satisfactory. The operation has been performed by others—among these are Dr. Imlach, one of the surgeons to the Liverpool Hospital for Women, who has operated fifteen times in the last sixteen months, and Dr. Burton, another surgeon to the same hospital, who has operated six times.

The operation appears to be a reasonable one, not very difficult of performance, and, if its results prove permanent, one that is to be commended, for certainly posterior displacements and prolapse of the uterus, if at all chronic, while they may be palliated, or relieved at least temporarily, very often are most rebellious to cure.

SOCIETY PROCEEDINGS.

THE NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, May 19, 1884.

THE VICE-PRESIDENT, CHARLES A. LEALE, M.D., IN THE CHAIR.

DR. GASPAR GRISWOLD read a paper entitled

NOTES ON ALBUMINURIA.

Ever since the publication of Dr. Bright's views in 1827, until very recently, he said, the presence of albumen in the urine had been regarded as positive proof of disease of the kidneys. This position remained unassailed as long as dropsy and other symptoms existing in connection with the albuminuria pointed toward the kidneys; but since it had become almost the routine practice of many physicians to test the urine of nearly every patient consulting them, a change of opinion had occurred. This had also been due, to a considerable extent, to the observations of medical men engaged in making examinations for life insurance. The somewhat startling fact had thus been developed that albuminuria was sometimes found in persons who stated that they were in perfect health, and who had every appearance of being so. These persons might be divided into three classes: (1) those in whom the albuminuria lasted a long time, occasionally continuing for years; (2) those in whom it was transient; and (3) those in whom it was intermittent, appearing at certain hours of the day, and being lacking at others.

The question, therefore, arose, Was this kind of albuminuria merely functional, or did it indicate some slight pathological change in the kidney itself? Having given a brief description of the renal epithelium, he stated that under ordinary conditions it permitted only the constituents of normal urine, which were purely excretory, to pass through it; but if its integrity were interferred with in any way, it would allow the blood-plasma and peptones to pass to a greater or less extent into the urine. Peptones were considered by some high authorities to be always present in the urine when albumen was.

Among the conditions which he mentioned as liable to be accompanied by a certain amount of albuminuria were hysteria, anæmia (in which there was recognized epithelial degeneration), and the presence of certain substances in excess in the system, as the biliary principles and iodide of potassium. When the latter was taken in considerable quantities, not only albumen, but casts, were sometimes found in the urine.

It would seem, therefore, that there was a temporary degeneration of the renal epithelium which attended the excretion of large amounts of solid constituents by the kidneys. In speaking of food-albumen, he said that if the albumen of eggs were injected into the blood, it would not be assimilated, but might be recovered from the urine into which it passed. It was, therefore, thought that imperfectly digested albuminous food might perhaps give rise to albuminuria in the same way. Degeneration of the renal epithelium seemed, as far as he was able to judge, to be the cause of albuminuria in nearly all cases; and hence he thought that there could be little doubt that the albumen met with in the urine in apparently healthy individuals was really of renal origin. Slight disorders of all the other organs were sometimes met with, and he saw no good reason why they should not occur in connection with the kidneys also.

Dr. Griswold then gave an abstract of the literature referring to albuminuria in apparent health, and among the authors whom he quoted was Sir William Gull, who had not infrequently noticed albumen in the urine of anæmic young girls about the time of puberty. Moxon had reported in the *Guy's Hospital Reports* nineteen cases of albuminuria in children, without other symptoms, and all of them recovered. Dr. George Johnson had remarked that this kind of albuminuria was more apt to be present in the afternoon, and particularly after exercise, bathing, etc. It was especially likely to be met with in those who indulged in sea-bathing, and remained in the water until they were blue and shivering. Such a condition was, therefore, regarded as a warning of the danger of such practices. He also quoted from German, French, and Italian writers, and then referred to the article of Dr. Munn in the *New York Medical Record* for March 22, 1879, in which he reported twenty-four cases of albumen in the urine of persons applying for life insurance who were apparently in perfect health, in two of them there being casts also in the urine. All were rejected simply in accordance with the rules of the

insurance companies, although in every other respect the individuals were in good condition.

Thus, he continued, there were a large number of excellent authorities who agreed as to the presence of albumen in the urine sometimes in health, and a very considerable number of cases of this had now been accumulated. In regard to the occurrence of albuminuria in the anæmia of puberty, he thought Sir William Gull's position was well taken. As to the effect of exercise in producing albuminuria, Dr. Griswold said that he had himself made repeated examinations of the urine of twenty-four persons after running two or three miles, taking long and brisk walks, etc. In every instance the exercise was sufficiently violent to induce profuse perspiration, and it had usually been followed by a cold shower-bath, which, it had been claimed, was especially favorable to hyperæmia of the kidneys and albuminuria. In not one of these cases, however, was he able to detect the smallest trace of albumen in the urine.

He then related the case of a gentleman who applied for a policy in the New York Life Insurance Company. He appeared before the health examiner in the afternoon, and the urine that he passed at that time was found to be highly albuminous; in consequence of which he was rejected. This was in February. In the following month he was persuaded by an energetic agent to make application at another company, and when his urine was examined at this time it was found to be normal, in consequence of which he was accepted. The gentleman then told what his experience had been at the other company, when, of course, it was deemed necessary to make further examinations of his urine. On the 14th of March it was found to be entirely free from both albumen and casts; but on March 22d it was distinctly albuminous and abounded in both fatty and granular casts. Just before this last examination it was ascertained that he had been taking a boxing lesson, as had also been the case before the examination in the other company. The gentleman then consulted Dr. Janeway in reference to the condition of his urine, and the latter carefully examined his water twelve times without detecting the least abnormality. Dr. Janeway then inquired what he had been doing before passing the urine in which the albumen was found at the life insurance companies, and, learning about the boxing lessons, he made several examinations of urine passed in the afternoon after taking the lesson. The result was that albumen and casts were found in every specimen examined. The importance of one such case as this, Dr. Griswold thought, could not be exaggerated.

He next passed on to speak of the influence of food. The effect of eggs in producing albuminuria had been alluded to by a large number of authors, and with a view to test the correctness of such statements he had experimented very thoroughly on himself, repeatedly eating as many as six eggs at a meal, both raw and cooked in various ways. On no occasion whatever was this ingestion of egg-albumen followed by the presence of albumen in the urine, and the same had been true in the case of a number of friends of his whom he had induced to partake largely of the same diet. In one instance, it was true, the examination of the urine showed the distinct presence of albumen; but, on investigation, it was ascertained that albuminuria also existed in this case when no eggs had been eaten, so that it could not, of course, be attributed to this cause. The gentleman was a physician, who had not previously had any reason to suspect that he was the subject of albuminuria. Eighteen individuals were experimented on, a large number of eggs being consumed by each one of them, with the above result. In regard to the effect of anxiety or mental strain in the production of albuminuria, as claimed by Albutt, Dr. Griswold said that he had had no opportunity to verify the statement, but that he thought it was probably an exaggeration.

In conclusion, he said that he thought we were justified in believing that the kidneys might be the subject of slight transient disease, as was the case with other organs. This was perhaps more properly renal inadequacy than actual disease, and while it was sufficient to produce albuminuria, it was not sufficient to require any special treatment, or to cause any uræmia. He then mentioned the case of a young physician who for some years after an attack of scarlatina, which occurred in his youth, was the subject of albuminuria; from which, during all that time, he was never free in the daytime. For the last four or five years, however, no albumen had been found in his urine. He also mentioned the case of another physician who some years since was seized, at the same time with an ordinary cold in the head, with a sharp pain in the lumbar region. He attributed it simply to lumbago, but a medical friend having jokingly suggested that he might have contracted Bright's disease, he made an examination of his urine, when he found to his surprise that it contained not only albumen, but hyaline casts also. After five days, however, both the albumen and casts disappeared, and had never been found in the urine since. The pain in the back and albuminuria occurred five years ago. Dr. Griswold thought, therefore, that there was probably the same relation between such a cold with albuminuria and Bright's disease that there was between a slight hemorrhage and phthisis. Although such hemorrhages were sometimes undoubtedly the forerunners of phthisis, in many other cases they were not followed by any serious results.

DR. A. FLINT, SR., remarked that the paper opened up a subject of great interest and very considerable practical importance. In addition to the subject of albuminuria, however, he said he should like to hear that of urinary casts also discussed; as these seemed in many instances to denote, if not a purely functional disturbance, at least not a grave form of disease of the kidneys. This fact was certain, that in quite a number of cases albumen and casts were found in the urine without being accompanied by those symptoms which were ordinarily found in acute nephritis, and that, after persisting for a longer or shorter period, they entirely disappeared, leaving the patient in perfect health. These cases were by no means infrequently met with in practice, and the presence of the signs mentioned were very apt to lead the physician to make a prognosis which was not borne out by the subsequent history of the case. He then related the case of a young girl, fourteen years of age, in whose urine a slight amount of albumen, with casts, was found. There was nothing in her condition to call attention to the kidneys, and, indeed, she had no appearance of being ill in any way; so that no examination of her urine would have been made, had the father of the girl not especially requested

it in consequence of the fact that Bright's disease had carried off one or more members of his family. The albumen and casts continued in the urine for a considerable period, although there was never at any time a condition of ill-health, and then disappeared altogether.

DR. WM. H. WELCH said that every one who made many examinations of specimens of urine sometimes met with cases in which there was albuminuria, and yet in which there was no disease of the kidneys that was susceptible of proof, and but a very trifling disturbance, if any, of the health in any way. Sometimes medical students, who were very apt to make examinations of their own urine from time to time, were surprised and alarmed to find the presence of albumen in it. This had been the case with a student two days before, who was apparently in perfect health, but who had been working very hard. Dr. Welch then mentioned the case of a gentleman whose urine was found to contain a slight amount of albumen while he was suffering from some disturbance of digestion. He soon recovered from this, but for ten days or a fortnight the quantity of albumen steadily increased, until it constituted a fifteenth part of the bulk of the urine. At this time he was apparently in perfect health, and it was a noteworthy fact that the quantity of albumen in the urine had been the smallest when he was feeling the worst. In oxaluria and lithæmia, or whenever there were abundant urates in the urine, he thought, as a rule, that a slight trace of albumen would always be found if the urine were examined soon after being voided. Dr. Griswold's theory of the inadequacy of the renal epithelium in albuminuria seemed to him a plausible one, but he hardly saw how its correctness could be established. It was certainly a matter of importance to the profession in general to understand that an individual might be in apparently perfect health and yet have albumen in his urine, and he thought that in many cases even when there was some impairment of the health, it was very hazardous to make a diagnosis of Bright's disease. Personally, he would attach no importance to albuminuria alone, and in some instances even where this was accompanied with casts.

DR. E. G. JANEWAY said that he had had the good fortune to secure an examination of every specimen of the urine passed by a patient for an entire month. This was found to be normal in specific gravity and normal in quantity, and to contain no casts, except on one occasion, when a few hyaline casts were detected. It was, however, always loaded with albumen in the afternoon; though early in the morning and again at night it was entirely free from it. It was found to be albuminous after breakfast, although not before, and Dr. Janeway at first thought that the albumen was caused by the food which he ate; but he afterwards ascertained that it also followed other things besides eating, such as a sponge-bath, mental worry or excitement, etc. The patient was a broker, and at night, when the cares of the day were all over, he was always free from albuminuria. Cases were sufficiently common in which, while there was albumen in the urine, there was no demonstrable kidney-trouble, so that the finding of a moderate amount of albumen had come to be regarded as no proof in itself; but in this instance the urine was actually loaded with albumen. There was a marked transudation of serum, and it was apparently due, in great part at least, to nervous influence. The case referred to by Dr. Griswold in his paper, in which albuminuria was found after boxing, was still more remarkable. In this, mucous casts were found occasionally at other times, but after the boxing lesson there were always hyaline, and sometimes, granular casts also. In the morning and at night again, however, there were neither albumen nor casts. This case would seem to show, therefore, that it did not take so long for hyaline casts to form as had generally been supposed. After his boxing lesson, this gentleman always took a sponge-bath with alcohol and water, and the sudden check of perspiration would seem, he thought, to have some effect in producing the albuminuria and casts. The case was certainly one of special interest, and it was impossible to say at present what the results would finally be. It seemed also to enforce the lesson that a single examination was not sufficient to exclude the existence of albuminuria. Medical men could not be too particular in this respect. It was well to remember, however, that two or three specimens of urine might be free from all albumen and casts when the patient was in reality suffering from distinct disease of the kidneys. This was apt to be particularly the case with the granular contracted kidney.

DR. FLINT said that he should like to add a word in regard to one practical point. The impression was somewhat prevalent, he thought, that because there was albumen in the urine there was danger of uræmic poisoning; but uræmia might be developed without any albuminuria whatever, and the practical point to which he wished to call attention was that the probability of the occurrence of uræmia depended solely on the quantity of urea eliminated (which could be determined sufficiently accurately for all practical purposes by noting the amount of urine passed), and on the specific gravity of the urine.

DR. GRISWOLD, in closing the discussion, referred first to the matter of albuminuria being caused by partaking of albuminous food in excess. All the works spoke of its production by eating largely of eggs, but he had never once met with any statements of actual experiments or facts to prove this. He thought, therefore, that the point was not well established; his own experiments, so far as they proved anything, distinctly militating against its correctness. He then went on to say that it seemed to him that the evidence went to show that we did have mild affections of the kidneys, as well as of other organs. These cases of transient albuminuria, however, ought to be watched and carefully followed up, so that the condition of affairs might be reported ten, fifteen, or twenty years hence.

DR. DANIEL BROWN then presented

A SPECIMEN OF ACEPHALOUS MONSTER.

He said that he had been called to attend a woman who was taken suddenly in labor at the end of seven and a half months of pregnancy. When he arrived, a well-formed male child had just been born, but was still attached by a remarkably short and thick cord to the placenta, which was adherent to the uterine wall. The situation of the placenta was just above the pubes (low down on the left side), and on making an examination, he found that there was a second fœtus in the uterus. This was delivered in four hours, and proved to be the

acephalous monster exhibited. It was entirely enveloped in a very thick and strong membrane of its own, which gave it the appearance of an enormous kidney, and which was firmly attached to its body by sebaceous matter. There was no amniotic fluid. The cord in this instance was at least three times the length of the other, and there was an entirely distinct placenta, which was attached at the fundus. The monster was sent to Prof. W. T. Lusk, who exhibited it before the class at Bellevue, and made a partial dissection of it. This was afterwards completed by Prof. Wm. H. Welch. There was a small amount of brain tissue, and the development of the heart seemed to have been arrested at the second month; though the rest of the circulatory system was comparatively complete. One of the kidneys was merely rudimentary, but the other was well developed. The intestinal tract ended about one inch above the anus, which was imperforate.

Dr. Brown then entered into a discussion of the theory of the development and nutrition of this class of monsters, as set forth by Lusk, Turner, Flint, Jr., Dalton, Cazeau, Braxton Hicks, Playfair and other authors, and stated his conviction that there was a direct continuity of circulation in the mother and fœtus, in opposition to those who believed that the true acephalous fœtus was always dependent for its nutrition upon the presence of a normal fœtus, from which its blood-supply was derived, there being no direct communication between the fœtal and maternal vessels.

DR. WM. H. WELCH remarked that if Dr. Brown was not mistaken in his assertion that there were two entirely distinct placentæ, the specimen was of exceptionally great value. Those who regarded such monsters as dependent upon another fœtus, based the opinion mainly upon the following premises:

1. The rudimentary character of the heart.

2. The fact that it was always associated with another well-developed fœtus.

3. The continuity of the placentæ and the anastomosis of the umbilical vessels of both children.

So far as he was aware, no case had as yet been reported in which the existence of two absolutely separate placentæ was so well established as in this, although it was certainly to be regretted that the placentæ had not been preserved by Dr. Brown. He could not but think, however, that there must have been some sort of connection between the two, as no instance of an acardiac monster developing alone in the uterus had ever been reported, so far as he knew. The existence of two distinct placentæ in this case, if established, would strike a blow against the generally accepted view that there was no direct communication between the fœtal and maternal vessels, and that the change in the fœtal blood was effected by endosmosis.

DR. J. LEWIS SMITH stated that he had seen several acephalous monsters, some of which were not of a twin character, and some of which lived for three or four days. Only the upper portion of the cranium, however, was wanting in the instances which he had seen, and one of them occurred in the practice of Dr. S. S. Purple.

DR. PURPLE then gave an account of the case to which Dr. Smith had alluded, but said that he thought it was, perhaps, hardly admissible to quote it in this connection.

DR. WELCH replied that incomplete development of the cranium was not analogous to the class of cases in question, which are absolutely non-viable. Although they were generally called acephala, *acardia* was the correct designation for them, and, having in reality no heart, it was, of course, impossible that they should live for a moment after birth.

DR. BROWN, in closing the discussion, repeated the statement that the placentæ were perfectly distinct, and attached at different parts of the uterine cavity. He thought there could be no possible doubt of these facts.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, June 5, 1884.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D., IN THE CHAIR.

THE STATISTICAL SECRETARY, DR. F. V. WHITE, announced the

DEATH OF THOMAS C. CHALMERS, M.D.,

one of the founders of the Academy, who was born at West Galway, Saratoga County, New York, on the 18th of June, 1810. He was graduated from Union College in 1831, and from the College of Physicians and Surgeons, New York, in 1835. He died June 4th, of uræmia, resulting from cystitis and pyelitis. Dr. White also announced the death of another Fellow, Dr. G. Le Roy Newcomb.

THE PRESIDENT then announced

THE DEATH OF THE SENIOR EX-PRESIDENT OF THE ACADEMY, DR. WILLARD PARKER, AND OF HONORARY FELLOW, DR. S. D. GROSS.

In connection with their deaths, he said that it had occurred to him that it would be of interest to refer to one or two facts regarding the first members of the Academy. It was founded in 1847, over 37 years ago, and of the 118 original Fellows, 100 were now dead. 7 had died between the ages of 80 and 90 (the average age at the time of death being 83), 18 between 70 and 80, and 47 between 55 and 70. Among the eight ex-Presidents who had died, the average age attained was 78.5, and only two of them, Drs. Watson and Bulkley, had died under the age of 70. The present Senior ex-President, Dr. James Anderson, had passed his 86th birthday, in the full possession of all his faculties, and all the other ex-Presidents, so far as he knew, were still actively engaged in the practice of their profession. This length of life seemed to him very remarkable, and he thought that no parallel could be found in any other body of 118 men brought together, without selection as to probabilities of longevity. The longevity of medical men as a class, had been acknowledged to compare favorably with that of any other profession, notwithstanding the anxieties, the mental strain, and the irregular sleeping and eating to which they were, as a rule, subjected; but he thought it a reasonable matter to inquire whether the Academy of Medicine had not had a special influence on the longevity of these 118 men, by stimulating them to lives of activity, usefulness, purity, and temperance, while it fostered those social qualities, the exercise of which was conducive to good health, and repressed emotions and passions that were unfavorable to length of days.

Having referred in feeling terms to the recent affliction of Dr. Samuel T. Hubbard in the death of his son, who had just entered the profession, and who lost his life from disease contracted in the discharge of his duties as one of the house staff of Bellevue Hospital, he went on to pay a tribute to the memory of the late Dr. Willard Parker, who had been elected President of the Academy in the year 1856, and who was at the time of his death its senior Ex-President. For many years, he said, he was the most prominent and conspicuous man in the profession in New York, both as a surgeon and as a general practitioner, and with the exception of Dr. Benjamin Rush, who lived a hundred years ago, no one ever wielded so commanding an influence over the community in which he lived, both medical and outside of the profession. His most distinguishing characteristic was quick perception, an insight which gave him an intuitive power of at once grasping the essential features of the cases which were presented to him, and discarding those which were unimportant and merely incidental. As a practitioner he was exceptionally successful, and this he attributed in no small degree to the stimulating and tonic effect of the cheerfulness, confidence, and hope with which he inspired his patients. It was also due in part, no doubt, to the practical value of hygienic and general directions which he was careful never to neglect to give. Dr. Barker said that he would not pretend to make any estimate of his rank as a great surgeon, but what contributions he had made to surgical literature had always been of an useful and admirable character. He had no doubt that his paper advocating operative interference in abscess of the appendix vermiformis had been the means of saving a very large number of lives, and he himself felt personally grateful for it, since, in consequence of it, two patients of his own had been successfully operated upon.

Passing on to speak of the late Prof. Gross, he mentioned that he had been elected a Corresponding Fellow of the Academy in 1851, and an Honorary Fellow in 1876. No man of the present age, he said had made such a reputation as a great surgical writer and teacher, and none had received so many honors from learned societies and institutions all over the world. His work had been simply monumental, and it had been continued up to the very last. He did not believe that there was any instance of a medical man at seventy-eight years of age writing such a remarkable paper as that on "Lacerations of the Female Sexual Organs Consequent upon Parturition," which he had prepared for the last meeting of the American Medical Association. While there might be some diversity of opinion in regard to a few minor points touched upon in it, the most distinguished gynecologist living might have been proud to have written it. It was not perhaps generally known that Prof. Gross had many years ago translated a manual of obstetrics, and a copy of this now rare work, which had been given to him by his classmate at college, the late Governor Andrews, of Massachusetts, he begged leave to present to the Academy.

The last occasion on which Dr. Gross had been present at the Academy was on the evening when the present hall was first opened. Dr. Acland, Regius Professor of Medicine at Oxford, in his speech alluded in the warmest terms to Dr. Gross, speaking of him as the senior graduate of Oxford. No one then present can forget his appearance when called upon by the Chair. It was evident that he had not anticipated such a call, but his speech was the most touching, from its effective simplicity, of any made that evening. It came straight from the heart, dropping with it, as his speeches always did, some suggestive thoughts. Dr. Barker closed with an eloquent tribute to the memories of both the illustrious surgeons.

THE DEATH OF DR. WM. H. HUBBARD.

DR. F. A. BURRALL then introduced, with a few appropriate remarks, the following resolutions, which were unanimously adopted:

Resolved, That the sympathy of the Fellows of the Academy be expressed to our esteemed and well-tried fellow-associate, Dr. Samuel T. Hubbard, in view of the great sorrow which he has experienced in the loss of his son, Dr. William Hustace Hubbard, who has been taken away at the very threshold of a promising career.

Resolved, That in this loss we recognize the fact that another name has been added to the list of those who have met an honorable death while in the discharge of professional duty.

Resolved, That a copy of these resolutions be sent to the family of the deceased.

The scientific work of the evening being now in order, DR. R. W. AMIDON read a paper entitled

A PLEA FOR MORE HEROIC SURGICAL INTERFERENCE IN AFFECTIONS OF THE BRAIN,

which will appear in full in our next issue.

DR. JOHN P. GARRISH said that he believed that the surgeons of the present day, as well as those of the past, had omitted the use of the trephine to too great an extent. He then related the case of a tailor who suffered from epilepsy in consequence of a blow upon the head. When he consulted Dr. Garrish he had already been subject to the epileptic seizures (which often occurred two or three times a day) for five years, and had consulted a number of physicians and taken a great variety of remedies without obtaining any permanent relief. On making an examination of his head, Dr. Garrish found a slight depression near the centre of the cranium, and, in consequence, decided to trephine him. A large portion of bone, which was found to be depressed one-sixteenth of an inch, was removed, and from that time the epilepsy entirely disappeared. The result obtained in this case induced him always to make very careful inquiries in every case of epilepsy that he met with as to whether it was of traumatic origin or not, and if on examination he found any depression of the skull, he did not hesitate to operate. In this manner he had completely cured five cases of epilepsy. Whenever there was any necessity for it, he cut through the dura mater without fear of any evil consequences, and if there was any extravasation of blood beneath it, this procedure was unquestionably called for. In this connection he related a case which he had met with after the battle of Antietam, while serving as an army surgeon during the late war. He accidentally discovered a soldier who had been lying in a barn in a state of unconsciousness, without food or drink, for three days. Finding that life was not extinct, he made an examination and discovered a depressed fracture of the skull. He at once trephined

the man, and finding that there was a considerable accumulation of blood under the dura mater, he cut through it and liberated the blood, with the effect of at once causing the patient to regain consciousness and open his eyes. He afterwards made a complete recovery. In certain conditions he considered trephining not only a justifiable but a necessary operation, and he believed it to be accompanied by very little danger. There were some cases of apoplexy, which were ordinarily left to die, which he thought might come to a favorable issue if trephining were promptly resorted to, and the lancet also used in connection with it. The brain was literally swimming in its own blood, and if a portion of this blood at least were removed in time, the patient would recover.

DR. M. JOSIAH ROBERTS remarked that as the paper suggested a more frequent resort to opening the skull, it was advisable that the *technique* of the operation should be improved in every possible way. With this end in view, therefore, he had devised an electrical apparatus which he thought would both facilitate its performance and diminish its dangers. It was somewhat analogous to the dental engine, but with it a considerably larger drill could be employed than with the latter. By means of this instrument, a section of a circle three-quarters of an inch could be removed, while the section could be made of any smaller size that was required. The division of the bone occupied but five seconds, and the instrument possessed the great advantage that it could be manipulated with the same delicacy of touch that a probe could.

DR. H. D. NOYES said that it had twice been his lot to deal with cases such as had been described in the paper. One had been alluded to in the latter, and the other had occurred many years ago, when antiseptic surgery was still unknown. It was that of a young man, who met with a fracture of the skull, from which resulted a fissure in the frontal bone situated in the orbit of the right eye. There was a purulent discharge, and the patient suffered from convulsions. At times he also had paralysis. The frontal bone was trephined just above the eyebrow, and three drachms of pus were evacuated. Increased frequency of the pulse and a rise of temperature followed the operation, but he ultimately recovered. Dr. Noyes said that he had been induced to operate by the fact that Dr. Detmold had before that boldly plunged a bistoury into the brain-tissue. His own operation was in 1867, and he thought, therefore, that it had been in the minds of surgeons to resort to operative procedure whenever the diagnosis and knowledge of the condition warranted it and the indications were sufficiently clear. In the second case, which had been referred to in the paper, there was no suspicion that a piece of iron five inches long was buried in the brain. It was probable, however, that if it had been allowed to remain, the patient's life would have been spared for a considerable time. In regard to the use of quinine and alcohol in such cases, he said he should like to inquire whether or not there was a general concurrence of sentiment as to their inadmissibility. It was probable that he would never again have to treat another of these cases, but he desired to know, if this should occur, whether he would be obliged to withhold these remedies if rise of temperature or other symptoms in which they were, under ordinary circumstances, indicated, should make their appearance.

DR. PUTZEL said that when he was still a student, his attention had been directed to this subject by some of the autopsies which he was accustomed to see at Bellevue Hospital. When he had seen blood accumulated under the dura mater as the result of concussion, etc., it had occurred to him sometimes, that if the skull had been trephined, it would, perhaps, have given the patient an additional chance of life. But this, he thought, was not the class of cases referred to in the paper. The statistics which the writer had given were open to the objection (which could be urged against all recent statistics), that only the favorable cases, as a rule, had been published. A considerable number had undoubtedly been left unreported, and this vitiated their accuracy. It was very natural that surgeons should hesitate to publish cases in which not only had there been an unfavorable result, but the autopsy showed that a grave mistake had been made in diagnosis; as was probably the case in a considerable number of other instances. He thought that Dr. Noyes had struck the keynote of the whole matter, when he said that the propriety of operating in any case depended to a great extent on the diagnosis and the knowledge of cerebral localization. In cases in which there was supposed to be a surface lesion, there might be an abscess several inches distant from the surface, and the cortex be found healthy. It was only in regard to the motor centres that we had at present any positive knowledge, and he thought that our means of diagnosis would have to be further advanced before we could be prepared, as a rule, to operate on the brain. With regard to the use of quinine and alcohol, he did not think that the question was at present definitely determined. In these cases it was necessary to take into consideration the condition of the heart, as well as the brain, and if there was any danger of the failure of this organ, he believed that we were called upon to give the patient alcohol. He thought the author of the paper was hardly justified in recommending chloral as freely as he had done. It might take an hour or two to secure any appreciable effect from the remedy; and if ten or fifteen grains were given every fifteen minutes, unpleasant results might ensue from the accumulation of the chloral in the system.

DR. AMIDON remarked that the contra-indication of quinine and alcohol was not definitely established, but in the case of phthisis, to which he had referred in the paper, in which he gave two and a half grammes (40 or 50 grains) of quinine a day, an attack of well-marked acute basilar meningitis seemed to be set up by it. The symptoms yielded to large doses of iodide of potassium, and when, some time afterward, the patient died of the phthisis, no trace of it, except a slight opacity, was left. There was no evidence whatever of tubercular meningitis in this case. He did not differ from Dr. Noyes in the opinion that if the foreign body had been allowed to remain, it would eventually have produced a fatal result. He thought Dr. Putzel had somewhat misunderstood him in what he said in regard to cerebral localization, which was, that neurologists were perfectly sure that there were certain definite regions of the brain, the irritation or destruction of which gave rise to unmistak-

able symptoms, such as localized paralysis and localized epilepsy.

PUBLIC PARKS.

DR. F. A. CASTLE then introduced a resolution, which was unanimously adopted, urging upon the Governor of the State, the signing of a bill recently passed by the Legislature, which provides for the purchase of several suitable tracts of land for use as parks in the upper part of the city. In pointing out the desirability of securing these lands, Dr. Castle referred to the very meagre manner in which New York was at present supplied with parks, as compared with either London or Paris.

On motion of DR. CASTLE, the By-laws were suspended and the Academy adjourned until the first Thursday in October, next.

ONTARIO MEDICAL ASSOCIATION.

Fourth Annual Meeting, held at Hamilton, June 4 and 5, 1884.

(Specially reported for THE MEDICAL NEWS.)

THE Association met at 10 A.M., in the City Council Chamber, THE PRESIDENT, DR. DANIEL CLARK, of Toronto, in the Chair.

After the registration of members and routine business, the reading of papers was proceeded with, the first paper being by DR. WORKMAN, of Toronto, on

APHASIA.

The greater portion of the paper was devoted to that form of the disease termed by Kussmaul *verbal deafness;* but motor and amnesic aphasia were also referred to. He traced in a few words the little that was known of this affection from the earliest records of Hippocrates down to the fuller and more scientific disquisitions of the present on the subject. He thought that it had almost undoubtedly been shown that Broca's, or the third frontal, convolution was closely and intimately concerned in the faculty of articulate speech, and hence was evidence in favor of the theory of cerebral localization.

DR. J. D. MACDONALD, of Hamilton, said that, as a general practitioner, he felt diffident in undertaking to discuss this paper, which required a specialist for its proper elucidation. Nevertheless, as a general practitioner, he occasionally met with cases of aphasia associated with paralysis of the right side to a greater or less degree of severity. He then detailed the case of a clergyman, an energetic, intellectual man, with an abundant flow of words. He became suddenly aphasic, and paralyzed on the right side. His vocabulary was limited to the words yes and no; in other respects he was quite well. In time he recovered sufficiently to resume his occupation, but slight defect in certain words always remained.

DR. MULLIN, of Hamilton, related the case of a business man, in good health, who had been detected making a very curious series of entries in his books. Some words were wrong and others partly finished. He slowly improved, and in time the deficiency passed completely away.

THE PRESIDENT dissented from the doctrine of cerebral localization. He regarded the cerebrum as a whole, as the receptacle of psychic impressions. He thought the localization theory as yet unproved.

DR. GEIKIE, of Toronto, related a case of amnesic aphasia. He heartily agreed with Dr. Workman in his remark that the writings of past generations were not sufficiently read and appreciated by the present generation of medical men.

DR. BRAY, of Chatham, related a case of aphasia in a puerperal woman, who had had an abundance of albumen in her urine. There was paralysis of the right side. Complete recovery followed.

AFTERNOON SESSION.

THE PRESIDENT, DR. DANIEL CLARKE, of Toronto, delivered the

ANNUAL ADDRESS.

After expressing his thanks to the Association for the honor conferred upon him, and his hope that he might be able to discharge the duties of the office in the same admirable manner as the Nestors of the profession who had preceded him in the presidential chair, he proceeded to a mild criticism of matters appertaining to the profession. The first matter referred to was the increase in educational facilities during the last few years, which he considered a matter of congratulation, and that there was no excuse to be offered for students with their present facilities and privileges, the results of which are to be seen in the improved culture of the younger members of the profession. In connection with this improved culture, he thought that great credit was due to the colleges and central licensing body for the institution of a higher curriculum. The President then referred to various advertisements in the different papers, both religious and secular, many of which advertisements, by their covert allusions, did great mischief to the morals of the community, especially to those of weak mind; allusion was also made at some lengh to many of the advertisers who were really worse than criminals. In conclusion, reference was made to the attitude which should be adopted by the profession in regard to prognosis especially, but also to the public generally, always maintaining a cheerful countenance, as so much attention was paid by the public to the countenance of physicians.

DR. POWELL, of Edgar, then read a paper on the

LATER ANTISEPTICS IN PRIVATE PRACTICE,

illustrated by specimens of various dressings, as wood wool, peat, iodoform gauze, corrosive sublimate gauze, decalcified bone tubes, etc., now used in the New York hospitals. He said that the security and success attending the use of these measures more than compensated for the additional trouble, while the expense was not now so great as to make it a drawback. He related a series of five cases of incised wounds of the knee-joint occurring in his practice which had been successfully treated under antiseptic dressings. He advocated cleanliness, elastic pressure, rest, and antiseptics.

DR. TYE, of Chatham, followed with a paper on

THE MANAGEMENT OF THE THIRD STAGE OF LABOR.

He discredited the Credé method of expelling the placenta, and advocated gentle pressure and manipulation over the fundus of the uterus.

DR. MACDONALD, of Hamilton, left the placenta

alone for some time, even for an hour, till it was completely detached.

DR. BRAY, of Chatham, gave an instance of his first and only trial of the Credé method. The result was unfortunate and troublesome, there being relaxation and profuse hemorrhage afterwards.

DR. BRYCE, of Toronto, wished to know the rationale of the brandy and ergot mixture given in cases of flooding in the third stage. He thought their physiological actions were antagonistic.

DR. RICHARDSON, of Toronto, said that he had been brought up in that school which deprecated meddlesome midwifery. He never worried and irritated the uterus by premature attempts to extract the placenta. He waited, and when it was lying in the vagina or partly in the vagina and partly in the os, by slight traction on the cord or by inserting one finger over the edge of the placenta, the air rushed in and the placenta was expelled without trouble. In a long course of practice he had never had those troublesome cases of irregular uterine contractions called hour-glass contractions. He did not consider brandy and ergot antagonistic; the ergot was given for its specific action on uterine fibre, and the brandy was always indicated in collapse and syncope from excessive loss of blood, and in these cases he gave it with unstinted hand.

DR. MULLIN, of Hamilton, said that when the placenta was lying in or near the os it was safe to leave it to the natural action of the uterus for expulsion; but when it was situated at a higher plane there was danger of hemorrhage, and physical interference perhaps was demanded. In any case the woman was not to be left till firm and continued contraction was induced. He always remained with his cases till he secured this, and then left with a light heart in the full assurance that they were safe.

DR. GUNN, of Brucefield, thought it best to wait about fifteen minutes before endeavoring to expel the placenta. The cord was frequently cut too soon, the child losing an appreciable quantity of blood by having the supply cut off too hurriedly. To prevent entanglement and breaking of the membranes, the placenta should be extracted just at the conclusion of a pain, as slight relaxation is setting in.

DR. HARRISON, of Selkirk, wished to know how one was to tell if all the membranes were away. His plan was to give a large dose of opium, or morphia, and thus place the patient in the constant security of rest and ease.

DR. WORKMAN found that the men of this generation were gradually returning to the principles of treatment advocated by him more than forty years ago.

DR. GRIFFIN, of Brantford, presented a specimen of

CANCER OF THE CÆCUM,

with the history of the case. T. W., æt. 66, female, of excellent health up to six years ago, when occasional attacks of diarrhœa occurred, followed by constipation and obstructive symptoms. Large quantities of gelatinous mucus, at times of great length, were frequently seen in the dejections. In 1882 a tumor the size of a walnut was discovered in the left mamma. The family history pointed to malignancy. A slight hemorrhage led to a rectal examination, when a small tumor was discovered in the upper part of the rectum. The distress gradually increased. Nodular growths appeared around the cervical, subclavian, and axillary glands, and two months before death complete obstruction ensued, no fecal matter whatever passing or coming away with enemata. The superficial tumors in the last few weeks of life diminished greatly in size. One week before death a liquid fecal discharge passed from the rectum. At the autopsy the abdominal organs alone could be examined. At the cæcum a hard tumor was found obstructing the lumen of the gut, so that a No. 4 catheter barely passed. There was no other sign of disease present in the abdominal cavity.

DR. A. H. WRIGHT, of Toronto, read a paper on the

PREVENTION OF PUERPERAL FEVER.

He took as his text that portion of the recent discussion in the New York Academy which referred to prevention. He objected to two principles in Prof. Thomas's rules: 1. The view that labor should be considered in the light of a capital operation. He thought preparations made with such a view had a very depressing effect. He gave instances in his own practice, showing serious results of emotional influences, and believed that such results were not always temporary, but sometimes led to serious lesions. 2. The advisability of prophylactic vaginal injections and the introduction of suppositories. He considered them both distasteful to the patients, and unscientific on surgical grounds.

In giving his own views he referred to the importance of surgical cleanliness, the dangers of stretching a slowly dilating cervix with the fingers, the necessity for depending upon expulsion for complete delivery of child, the desirability of keeping up constant but remittent pressure and kneading of the uterus, not so severe, however, as practised in Credè's method, and, generally speaking, defended the teaching of conservative obstetricians.

DR. POWELL, of Edgar, thought that the paper showed that the author had put his heart into the work. In tedious labors with rigid os, the temptation was strong to undertake digital dilatation. He had practised dilatation on various occasions, but in two or three cases developing cellulitis after such proceedings, he had discontinued the practice.

DR. BRAY, of Chatham, thought that the dangers of puerperal infection were reduced to a minimum by efficient contraction of the uterus. When he had secured that, he left the case satisfied.

DR. BURNHAM, of Toronto, read a paper on

CARBOLIC ACID IN PURULENT AFFECTIONS OF THE EYES,

in which he advocated the use of a solution of one in forty at first, to be increased to one in twenty. The eye was to be irrigated with this solution hourly, day and night. At the same time, cloths wet with ice-water were to be kept constantly applied, being changed frequently. With this mode of treatment he did not find it necessary to shield the bandage more than by keeping the patient lying with the diseased eye downwards. It was necessary to make use of the purest acids, as others were irritating. This method of treatment was drawn from his experience with a very large number of cases. Other antiseptic and astringent applications had failed to give equal results.

DR. HOWE, of New York, said that he saw no special advantage in the carbolic acid treatment over that with

nitrate of silver and other astringents with ice-water. We had other antiseptics equally effective. He gave statistics of purulent ophthalmia in children in a large hospital, where, of 3000 children, the percentage of conjunctivitis was from nine to fourteen per cent. This meant a large proportion of blind children. After the introduction of perfect cleanliness and antiseptics, this percentage fell to nothing.

DR. THORBURN, of Toronto, reported a case of

DISLOCATION OF THE FOURTH AND FIFTH CERVICAL VERTEBRÆ.

Death occurred in twenty-four days. He gave a *resumé* of all such cases that had been reported.

DR. BROUSE, of Brockville, read a paper describing

A CASE OF OVARIOTOMY.

On opening the peritoneal cavity, six quarts of pale, straw-colored, syrupy liquid were discharged. There were no adhesions. The case did well.

He also read a paper describing two cases of

STRANGULATED HERNIA.

They were both operated on, the sac being opened in each case, and the bowel found dark and gangrenous. One case recovered; the other, an old, feeble patient in whom obstruction had existed seven days, died.

Drs. Groves, Campbell, and others, took part in the discussion of these cases.

JUNE 5TH—SECOND DAY.

MORNING SESSION.

DR. GRAHAM, of Toronto, read a paper on

IDIOPATHIC ANÆMIA.

He had met with seven cases in all of this obscure disease. The cases were carefully and minutely detailed. Most of them were males, chiefly farmers, well on in years. Recovery was undoubted in one case, and in another there was considerable improvement. In the treatment, arsenic was mainly relied on; it appeared to benefit mostly in the latter stages.

The etiology of the disease appeared most obscure. He mentioned as a possible hypothesis that it might be a central nervous lesion, causing a change in the corpuscular element of the blood in a manner somewhat analogous to that in progressive muscular atrophy.

DR. ARNOTT, of London, said that he had had many cases of profound anæmia under his charge. He had been moderately successful in the treatment of these by iron, arsenic, phosphorus, etc. One case resisted all means; he was in despair, when his attention was attracted by a notice of the peculiar tonic effects of eucalyptus. He tried the fluid extract, and, to his surprise, improvement began and progressed rapidly. Since then he has used it with constant benefit in nearly all cases of anæmia.

DR. SHEARD, of Toronto, thought that an error was made in referring all obscure diseases to the nervous system. He had made the post-mortem examination of one of the cases with Dr. Graham, and failed to discover any sufficient cause for such an hypothesis. In this case he had made a most careful autopsy, and found no lesion of the nervous system. He thought the fluids of the blood might possibly be in such an abnormal state as to produce the changes found in the blood corpuscles.

DR. CAMERON suggested that, like scorbutus, this disease might be due to an insufficient supply of vegetable food.

DR. TURVER, of Parkdale, read a paper on

STUDIES IN UTERINE DISPLACEMENTS,

and showed a soft rubber anteversion pessary modelled after Gehrung's, which he had made of soft rubber, adding a diaphragm over the upper arms for the purpose of supporting the arms.

DR. GROVES, of Fergus, read a paper on

SURGICAL OPERATIONS IN CHEST EFFUSIONS,

in which he advocated a double opening and free drainage when pus was present. He detailed a number of cases which had done well under this treatment.

DR. POWELL, of Edgar, had operated in many cases, and showed a plan adopted by him for retaining the drainage-tube, which he made of a Jacques's soft-rubber catheter. This he strengthened with some firm material to prevent compression, and passed it through a hole in a Martin rubber bandage, worn around the chest.

DR. RICHARDSON, of Toronto, had adopted the siphon method of draining the pleural cavity many years ago, with results eminently satisfactory.

DR. TEMPLE, of Toronto, had given up making the second opening. He thought that after the formation of pus it was a matter of indifference if air entered the pleural cavity.

DR. HUTCHINSON, of Brussels, exhibited a case which he supposed to be one of *Hodgkin's Disease*.

CEREBRO-SPINAL FEVER.

DR. WORTHINGTON, of Clinton, read a paper detailing the history of cerebro-spinal meningitis as it had appeared in an epidemic in his section of the country several years ago.

DR. HARRISON, of Selkirk, adverted to a form of disease which he had described a year ago—beginning suddenly, and bearing a close resemblance to typhoid, but puzzling all who came in contact with it by its recrudescences and lengthened course. He had recently met with another case, which began suddenly and closely resembled hemorrhagic variola. It proved to be a case of cerebro-spinal meningitis. It also took on the protracted and curious form. He was inclined to believe that these anomalous fevers were all cerebro-spinal.

DR. WHITE, of Toronto, said that in an epidemic of cerebro-spinal fever he had met with some years ago, the cases all followed the course of the river, avoiding the high grounds on either side.

DR. OSBORNE exhibited a case of *Epithelioma of the Face*.

DR. REID exhibited a case of *Knee-joint Disease* which began two years ago after an injury.

AFTERNOON SESSION.

DR. RIORDAN, of Toronto, described a unique case of *Double Uterus and Vagina*. He purposed removing the vaginal septum.

DR. BROWN, of Galt, presented some

GLIMPSES OF TRANSATLANTIC SURGERY,

in which he detailed his impressions of many of the eminent surgeons of Edinburgh and London. He

strongly advocated frequent stated visits to these and similar centres of medical thought.

Dr. A. M. Rosebrugh of Toronto, read a paper on

BOROGLYCERIDE IN THE TREATMENT OF SUPPURATIVE INFLAMMATION OF THE MIDDLE EAR,

in which the point was emphasized that suppurative inflammation of the drum-cavity is a disease that preëminently calls for antiseptic treatment. The indication is to keep the tympanic mucous membrane constantly bathed in a solution which, while it is antiseptic, is not irritating, and while it is gently astringent it does not form coagulations with the secretions. Solutions of boroglyceride in glycerine seem to meet these indications better than any known antiseptic. Finely pulverized boracic acid has been used with much success by Bezold and others, but, other things being equal, a fluid, at least on theoretical grounds, would seem to be better adapted to the *mucosa* than a powder, however finely it may be triturated. Boracic acid, moreover, does not supplant, but simply assists other methods of treatment, whereas the boroglyceride, at least in the hands of the author, not only destroys all fetor and quickly arrests the discharge, but it also destroys polypoid granulations without resort to caustics. Boroglyceride is prepared by heating together in an evaporating-pan, two ounces of boracic acid and three ounces of glycerine, the acid being added gradually, and the heat continued until the mass is reduced to exactly three and one-third ounces, or two-thirds the original weight. On cooling it is an amber-colored, vitreous mass, which is very friable and easily broken when sufficiently evaporated. It is readily soluble in glycerine, but much less so in water. It is used dissolved in glycerine—the treatment commenced with a fifty per cent. solution, and the strength gradually reduced as the discharge diminishes. The treatment is largely entrusted to the patients, they being seen but twice or three times a week, when the meatus and tympanic cavity are thoroughly freed from all secretions by means of syringing with a warm solution of boracic acid, and Valsalva inflations, or the use of an Eustachian catheter. The meatus is half filled with the boroglyceride (warmed), and the air forced through it by Valsalva inflation, or the catheter. The tragus is also pushed backwards and inwards, so as to force the medicament into the middle ear. The boroglyceride is kept in position by means of a plug of absorbent cotton, or borated cotton soaked in vaseline. The patient repeats the process as well as he can, night and morning, at home. By this treatment it is claimed that the patients can be discharged cured in less than half the time required by the usual methods.

Dr. W. H. B. Aikins, of Toronto, read a paper on

SPERMATORRHŒA.

The differences between pollution and spermatorrhœa were pointed out, and that patients were often thought to have seminal discharge when it was only prostatic secretion. The microscope affords the only reliable means for a diagnosis. Seminal emission may be considered physiological when the discharge is followed by a feeling of well-being; if followed by malaise, it is pathological.

In spermatorrhœa, endoscopic examination shows hyperæmia of veru montanum, a catarrhal state of the mucous membrane, the orifices of the ejaculatory ducts are more prominent, and their edges thicker than normal.

Treatment consists in removing the source of irritation, tonics, medicines to reduce reflex irritability and regulate circulation. If great hyperæsthesia exist, unmedicated gelatine bougies, or bougies of cocoa-butter containing extracts of opium and belladonna should be used. The use of metal sounds and the cooling sound, or catheter of Prof. Winternitz, is highly beneficial. When the hyperæsthesia is lessened, recourse should be had to deep injections of five per cent. solution of nitrate of silver.

Dr. Campbell, of Seaforth, reported a case of

EXOPHTHALMIC GOITRE

in a woman, æt. 45. The symptoms began shortly after a severe fright. When she came under observation, the symptoms were well marked—she also had hemorrhagia. Iron, quinine, digitalis, and ergot, were given for some time—the last on account chiefly of the profuse menstrual flow. In January, 1883, severe gastric disturbance set in, and nothing was retained but small quantities of milk and lime water. By March she was greatly reduced, temperature 101°, probably due to gastric catarrh, though possibly to the goitre. Murmurs over all valves of the heart, and great throbbing of large vessels. Food and medicines were given by the rectum. Galvanism along the course of the pneumogastric was resorted to twice daily for five minutes. After a few days she was able to take fluid food—solids in two weeks. In six weeks she partook of her usual diet and attended to household duties. She is now quite well; eyes normal, no murmurs or any symptoms of her illness. Ergot and digitalis seemed to be the most effective medicines in this case. The author was not prepared to say how much benefit should be attributed to the galvanism. Hammond reports cures from its use alone.

Dr. Harrison, of Selkirk, read a paper on

VACCINATION,

in which he dealt with the coincidence theory of the subsidence of smallpox after the generalization of vaccination. He said it was just as reasonable to attribute the soporific effects of morphia to coincidence.

Dr. Boyce, of Toronto, said that bovine virus was not always perfectly satisfactory; that at times the virus produced most unpleasant effects or was inert. If the virus lay in the pure lymph, it was necessary to get this pure, and not mixed with pus, blood, and epithelium. He thought the importance of this question justified him in exhorting all members of the profession to be more than particularly careful and circumspect in obtaining and using vaccine.

The Nominating Committee presented their report, which was adopted. They recommended that the *place of meeting*, next year, should be in London.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. Addison Worthington, of Clinton.

Vice-Presidents.—Drs. Tye, of Chatham; Thorburn, of Toronto; Brouse, of Brockville; Powell, of Edgar.

Permanent Secretary.—Dr. White, of Toronto.

Treasurer.—Dr. Graham, of Toronto.

Corresponding Secretaries.—Drs. Irwin, of Kingston; Harris, of Brantford; and Waters, of Cobourg.

A number of other papers were then read by title. The reports of the various committees were handed in and accepted as read. The meeting then adjourned after giving the usual vote of thanks.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, May 27, 1884.

THE PRESIDENT, R. F. WEIR, M.D., IN THE CHAIR.

DR. A. C. POST read a paper entitled

CONGENITAL DEFORMITY OF HAND; COMBINED ECTRODACTYLISM, AND SYNDACTYLISM.

(See page 691.)

At the conclusion of the paper, Dr. Post remarked that the one most important point was, in difficult cases, to operate separately upon each individual space. If all are operated upon at once it sometimes gives rise to serious inflammation, and there is always increased difficulty in applying the dressings.

SARCOMA OF THE LOWER JAW.

DR. POST presented the specimen, which was interesting especially on account of one point connected with the operation. The tumor was removed from a girl twenty years of age. The existence of the tumor had been recognized eight months. He divided the jaw bone through the middle, and removed all the swollen part of the jaw, the outer incision extending to the angle, when he found marks of the disease extending further. He then removed a second, and finally a third, segment of bone. After removing the first segment of bone there was rather copious hemorrhage, which came from the inferior maxillary artery, which he plugged with wax. After making the second section of the bone the hemorrhage was profuse, and could not be controlled by means of wax, and he therefore drove a wooden plug into the bone. Afterwards he cut above the entrance of the inferior maxillary artery into the bone, and no hemorrhage followed. The laceration of the artery by driving the wooden plug into it had completely arrested the hemorrhage, so that afterwards, when the ramus of the bone was divided above the entrance of the artery, there was no trace of hemorrhage.

MYOFIBROMATA OF THE UTERUS; LAPAROMYOMOTOMY.

DR. L. A. STIMSON presented the uterus with myofibromata attached, which he removed, on the 24th of May, from a colored woman thirty years of age. The patient was sent to him from New Jersey, with a history of tumor, which was first noticed eighteen months ago in the lower portion of the left side of the abdomen, and which caused so much pain and distress that she was unable to earn her living. She was the mother of one child, born ten years ago. On examination he found a firm, irregular tumor extending a little from the right of the median line above the pubes upwards to the left, and occupying the left iliac fossa to the height of the umbilicus, and it could be felt through the vagina in front of the uterus. The patient was kept under observation for a few days, when it was found that the tumor had changed its position somewhat, and by exploration of the uterus it was found to be independent of it, or at least movable upon it. A second tumor, thought to be the uterus, was felt behind and to the right of the main tumor. The diagnosis was that of a pedunculated fibroid of the uterus with other fibroid growths within the uterus. An operation was undertaken for their removal by making an incision in the linea alba from the umbilicus downwards, under bichloride irrigation, and after the bleeding had been completely arrested the peritoneum was divided to an extent sufficient to admit four fingers, when the diagnosis was confirmed by digital examination. The tumor was brought out through the incision, consisting of a mass somewhat heart-shape in form, measuring about five inches in its greatest diameter, irregular in outline with many nodules, and connected with the anterior surface of the uterus by a narrow pedicle. On drawing out the left ovary it was found that the broad ligament was increased in width and length, and that the ovary was at some distance from the uterus. The ligament was transfixed below the pampiniform plexus with an ivory pin carrying a double silk ligature, and the ovary with the plexus was cut off with the tube. Then bringing the right ovary into sight, it was found so closely attached to the uterus that a ligature could not be safely attached without causing an unfavorable amount of bleeding, and as the cervix was long and narrow, he decided to remove the entire organ by amputation through the cervix. The uterus was drawn up, the cervix was transfixed with an ivory pin carrying a double silk ligature, by means of which a round rubber cord, about three millimetres in diameter, was carried and tied upon either side, and the organ with the remaining ovary was cut off above. The pedicle was so long that it could be easily brought into the abdominal wound, and was secured in the lower angle with two pins. There was no hemorrhage except very slight from the puncture of the cervix by the ivory pin, and when the operation had been completed, and the sponge was introduced into Douglas's cul-de-sac, it brought away only one small clot about an inch in length and about the size of a lead pencil. The peritoneum was united by a continuous catgut suture, as was also the aponeurotic layer. Six silver sutures were then passed about two inches from the edges of the abdominal wound and made fast with buttons. The stem of the pedicle was transfixed with two steel needles resting in the skin, and the cutaneous incision closed with a continuous catgut suture. A decalcified bone drainage-tube was inserted under the skin from the upper angle of the wound to the pedicle, and the whole was covered with iodoform and gauze. On the next day, as there were some abdominal tenderness and slight elevation of temperature (101°), the dressing was removed, some dry bloody serum was found and the wound was dry. He covered the wound with a little gauze, kept wet with the bichloride solution, and applied the leaden coil, and under that treatment the pain had diminished, and the temperature had sunk to 100.25°, and now, on the fourth day after the operation, the patient was apparently out of danger. She had also received a small quantity of morphine, about thirty minims of Magendie's solution in the course of twenty-four hours. May 31st, patient doing well.

COMPOUND FRACTURE OF THE SKULL.

DR. STIMSON also presented a specimen which showed much more extensive fracture of the inner than of the

outer table of the skull. The patient was walking upon the street when a brick fell from a building and struck him upon the right temporal bone about one inch to the outer side of the median line, driving in a portion of the skull to the depth of nearly one inch at the deepest point. The patient remained conscious. On the 24th of May, when he saw him, three hours after the receipt of the injury, he found a ragged wound of the soft parts, exposing a denuded area of bone, and from the broken edge of the bone there came out a small quantity of brain matter. Dr. Stimson gnawed away the adjacent portion of bone, and was able, after enlarging the opening somewhat, to withdraw the piece of skull presented, of which the outer table was somewhat irregular and perhaps three-fourths of an inch in diameter, while the inner table was one inch and a half in diameter. The patient was doing well. The escape of brain matter ceased as soon as pressure was removed.

VESICAL CALCULUS REMOVED BY LITHOLAPAXY.

DR. STIMSON also presented a specimen of hard phosphatic stone, which, on the 14th of May, he removed from the bladder of a man fifty years of age. The time consumed was about forty minutes. Before the operation the patient was passing water every fifteen minutes or half an hour, and there was considerable cystitis with ammoniacal urine. On the day following the operation he was able to hold his urine for five hours. The special point of interest in connection with the operation was that he used only small instruments, nothing larger than No. 28 French, although the urethra was roomy. The stone weighed three hundred grains.

THE KENTUCKY STATE MEDICAL SOCIETY.

Twenty-ninth Annual Meeting, held at Bowling Green, June 3, 4, and 5, 1884.

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, JUNE 3D—FIRST DAY.

THE twenty-ninth annual meeting of the Kentucky State Medical Society was called to order at Bowling Green, by THE PRESIDENT, DR. J. N. MCCORMACK, at 2 o'clock P. M.

DR. S. J. TOWNSEND, of Bowling Green, Chairman of the Committee of Arrangements, made an address of welcome, which was seconded, on behalf of the residents of the city, by the Hon. C. W. McElroy, and responded to on behalf of the Society by Dr. Dudley S. Reynolds, of Louisville.

DR. J. P. PEMBROKE, to whom had been assigned the subject of

MATERIA MEDICA,

reported that he had given a fair test to the hypnotic *paraldehyde* suggested as a substitute for chloral and opium, and his investigations had led him to regard it as a very mild hypnotic, adapted only for those cases of insomnia due to excitation of the nervous system. *Kairine*, as an antiperiodic and febrifuge, unless used in dangerous doses, he found not equal to salicylic acid or quinine. He remarked that he had unexpectedly produced almost fatal paralysis of the heart by its use in one case with ten grains. *Hyoscyamine*, in one case of insanity of the form of acute mania, seemed rather to increase than allay the excitement.

DR. J. M. MATTHEWS, of Louisville, said that he had used chloral for years, and found it a very uncertain and sometimes dangerous drug.

DR. J. W. HOLLAND, of Louisville, had hoped to hear included the word opium, in connection with chloral, in reference to their mutual action upon the form of insanity known as melancholia. Sydenham, however, called attention, more than a century ago, to the cordial qualities of opium. If there be already a melancholia, it proves more profound when chloral is employed than when opium is used, and the tendency to suicide is increased. Hyoscyamine is responsible for the same effect.

DR. STONE, of the Western Lunatic Asylum, at Hopkinsville, said that hyoscyamine had been used in that institution, not only very extensively, but almost altogether, hypodermatically and in large doses; frequently attaining by this method, as high as one-twelfth or one-tenth of a grain. In smaller doses it has been kept up for ten or twelve weeks, but without any apparent advantage over other drugs used to accomplish the same purpose. It will procure sleep, and that very promptly, in acute mania, and sometimes better than chloral. He agreed with Dr. Holland as to the superiority of opium over chloral in melancholia.

DR. W. M. FUQUA, of Hopkinsville, had used chloral from its very earliest introduction. He thought there could be no question that it produces, when long continued, an anæmia of the brain; that it exercises a powerful effect on the cardiac centres, and that its action is cumulative. It is anæsthetic as well as hypnotic.

DR. R. M. FERGUSON, of Louisville, read a paper on the *Nature of Glaucoma*.

DR. A. M. VANCE, of Louisville, called attention to

A NEW METHOD FOR PRODUCING LOCAL ANÆSTHESIA

for the minor operations in surgery. It consisted in a modified application of the spray of ether. Dr. Vance stated that anæsthesia occurs long before the parts are frozen, and he begins his operations a few seconds after the spray begins to play upon the part. In this way an eye had been enucleated without general anæsthesia; a tracheotomy had likewise been successfully performed, and he had cut the whole plantar fascia in a child without a flinch, beyond what was first made when the cold ether struck the surface. He said it was his uniform custom to resort to it alone in all tenotomies.

DR. PINCKNEY THOMPSON said that he had only practised it in one instance of hemorrhoids, and in that it was certainly preferable to general anæsthesia.

DR. J. M. MATTHEWS said that he had tried this plan in several cases, but his experience had not been so favorable as Dr. Vance's. In the limited number upon whom he had tried it the pain following the operation had been excruciating.

DR. T. H. STUCKY, of Louisville, then read a paper on *Catarrhal Headache*.

WEDNESDAY, JUNE 4TH—SECOND DAY.

MORNING SESSION.

DR. L. S. MCMURTRY made the report on

THE PROGRESS OF SURGERY,

the first portion of which was devoted to a consideration of the subject of anæsthetics. Recent investigations as

to the comparative merits of sulphuric ether, chloroform, bromide of ethyl, and anæsthetic mixtures of these agents, were reviewed in detail. The experimental investigations of Dr. B. A. Watson, of Jersey City, were carefully considered. The deductions were that sulphuric ether is decidedly the safest anæsthetic which has yet been employed in surgical practice, the mortality being relatively small when compared with that of chloroform, bromide of ethyl, and the mixtures employed. These results of experimental study are confirmed by clinical experience. Dr. McMurtry doubts if any agent will ever be found which can carry patients so near the border-lines of life in safety. He doubts if anything is accomplished in avoiding danger by the indiscriminate exhibition of alcohol before giving an anæsthetic. He then discussed the method introduced by Mollière, of administering the vapor of ether per rectum. The recent publications of Dr. William T. Bull, James B. Hunter, and Robert F. Weir upon this mode of anæsthesia, and the brief experience already recorded, he claimed, demonstrate the danger of the method as exemplified by intestinal hemorrhage and diarrhœa; but the advantages of a method which suppresses the period of excitement, permits accurate regulation of dosage, avoids bronchial irritation, and aids materially in operations about the face are apparent; and the method deserves to be tested thoroughly. In concluding this portion of the report the speaker commended the ether inhaler of Dr. Allis, of Philadelphia.

The greater portion of Dr. McMurtry's paper was devoted to recent improvements in abdominal surgery. He discussed at length the treatment of wounds of the intestines, and declared the indications of treatment in contused, lacerated, punctured, and gunshot wounds of the intestines to be prevention of fecal effusion and peritonitis. To secure the first, the wound of the tube must be securely sutured, however small it be. To do this, and cleanse thoroughly the peritoneum, the abdomen should be opened by abdominal section. The speaker, in this connection, called attention to the very confident views expressed by the late Dr. Marion Sims in 1882, which he then quoted: "I have the deepest conviction that there is no more danger of a man's dying of a gunshot or other wound of the peritoneal cavity, properly treated, than there is of a woman's dying of an ovariotomy properly performed," and remarked that in the able paper of Dr. Parkes recently given to the profession on this subject, this statement of Dr. Sims was deemed prophetic. Dealing with another branch of abdominal surgery, Dr. McMurtry alluded to the difficulties and uncertainties which surround the diagnosis of abdominal tumors. These difficulties were so great that in a large number of cases the diagnosis can only be positive when the abdomen is opened. He detailed illustrative cases from his own experience. In one case, that of a young lady with a fluid accumulation in the abdomen, the patient had been in the hands of several skilful surgeons, with a different diagnosis by each. After aspiration and the removal of two gallons of fluid, complete recovery ensued, thus showing the tumor to be a cyst of the parovarium. After discussing at length the differential diagnosis of abdominal tumors, the speaker concluded with the statement that "while the results already achieved in the brilliant domain of abdominal surgery surpass the expectations of the most speculative enthusiast of half a century ago, there remains a vast and rich outlying province as yet untrod by the restless foot of genius."

DR. A. W. JOHNSTON called attention to the absence of any reference to the importance of drainage in the treatment of wounds of the abdominal cavity, which is one of the most important features of the after-treatment of these wounds. Lawson Tait speaks of drainage by the alimentary canal. He says he has made it a practice to purge these patients, and that he secures excellent results from it. We all know that when a purgative is given, and succeeds in bringing an operation, that water must come from somewhere, and this method Dr. Johnston has found to act well in two cases under his charge. One of them exhibited marked improvement from the action of the purgative. His abdomen was distended, and he vomited frequently; but after the large dejections secured by calomel and podophyllin, he recovered rapidly. After ovariotomy, he thinks the large drainage-tubes now in use very much to be preferred to the small ones selected formerly. In one case upon which he operated where the tumor was removed, the attachments were found to extend all through the abdomen, and the large bleeding surface rendered the application of the persulphate of iron in some places a necessity. The large drainage-tube afterwards used permitted the clots formed by it to pass with ease.

DR. D. W. YANDELL, of Louisville, said that he had the deepest conviction that there is no more danger of a man's dying of a gunshot or other wound of the peritoneal cavity properly treated, than there is of a woman dying of an ovariotomy properly performed. That is to say, that ninety per cent. of wounds of the abdominal cavity ought to recover. There can be nothing more certainly misleading, both to the people who are, after all, our auditors, and to the profession, than that statement. Taking the experience of the individual members of this Society, and it will result that out of six cases of gunshot wounds of the abdomen four will die —one of peritonitis, two of hemorrhage, and one of septicæmia. Two will die of hemorrhage, then, and two of something else. Now, in performing ovariotomy we know when and where hemorrhage will probably occur, and we are therefore prepared to meet it. Again, the shock is deeper from a shot wound than from that made by the surgeon's knife, and the wounded person is seen for the first time in that condition. Further than this no man has yet been so wise as to be able to say what course a ball has taken after it has once entered the body, and while he believes it is good surgery to open the cavity, as taught by the master of us all, yet there are many cases in which it is not good surgery; that is to say, here is a man who has had a ball from a Derringer pistol through him, you find him pulseless and cold; under such desperate circumstances Dr. Yandell did not believe it good practice to open the wound.

With cutting wounds it is quite otherwise, the shock is not so great, all about the wound the tissues are puffy, and it is evident hemorrhage is taking place; under those circumstances the indication to open the wound and find the bleeding vessel is plain. He wished to say that the declaration of a great man published in a moment of enthusiasm is misleading; that the state-

ment is not sustained by facts nor likely to be sustained; and that shot wounds are incalculably more dangerous than the knife of the surgeon in operations.

(*To be concluded.*)

CORRESPONDENCE.

ANÆSTHESIA BY THE MIXED METHOD.

To the Editor of THE MEDICAL NEWS.

SIR: In the number of your journal for March 22d, I observe an editorial article upon the importance of anæsthesia by the "mixed method."

During the last six months I have adopted this method with the most satisfactory results.

The following cases will illustrate the important advantages of this late improvement in producing the anæsthetic state:

Case I.—A lady, aged forty-six, with a carcinoma of the right breast, applied for extirpation. Half an hour before proceeding to operate I gave her, subcutaneously, a dose of morphine and atropine. She felt quite drowsy before commencing the administration of the ether, and in less than four minutes was profoundly anæsthetized. The operation occupied considerable time, for the gland was exceedingly large, and the hemorrhage was troublesome. She rallied well, and had comparatively little pain after the operation. No vomiting occurred.

Case II.—A man, aged fifty-two, had his leg amputated for necrosis of the femur. Forty minutes before administering the ether I gave him, subcutaneously, a dose of morphine and atropine, as in the above case. Profound anæsthesia was induced in a few minutes with the utmost facility. No vomiting, delirium, or pain immediately after the operation occurred.

Case III.—A man, aged forty, had both feet badly frozen about three weeks before I was called to see him. As they were quite gangrenous, I decided to amputate before the patient would become weaker. I gave the morphine and atropine subcutaneously, as in the above cases. In fifteen minutes he was sleeping soundly, the first time for several days. A few ounces of ether were sufficient to produce insensibility, and no opium was required after the operation to allay pain.

This meagre record is sufficient to show the great advantages of the mixed method. Some of the strongest objections to ether, which, by the way, is the safest anæsthetic, are now overcome. Administered about thirty minutes after the injection of morphine and atropine, it is rapid in its action and not irritating to the air-passages. A smaller quantity is required, and its effects are less unpleasant.

Yours respectfully,

P. A. MACDONALD, M.D.,
Medical Superintendent of the Marine Hospital, Port Hawkesbury, N. S.

NEWS ITEMS.

DINNER TO DR. ALFRED STILLÉ.—On Thursday evening, June 5th, Dr. Alfred Stillé was tendered, on behalf of the medical profession of Philadelphia, a complimentary dinner at the Hotel Bellevue. The President of the College of Physicians, Dr. Da Costa, presided, and covers were laid for seventy-seven. Among the invited guests present were Drs. Austin Flint, of New York, George C. Shattuck, of Boston, J. S. Billings, of Washington, Charles J. Stillé, of Philadelphia, R. S. Ives, of New Haven, and Traill Green, of Easton. The profession of Philadelphia was represented by its most prominent members.

Upon the completion of the *menu* Dr. Da Costa called the company to order and spoke as follows:

In rising to propose the health of the guest of the evening, I do so with mingled feelings. Joined to the pleasure of the duty, is the sad reflection that the master to whom common consent had assigned the agreeable task, has gone from among us, and that on another has devolved the expression of the kindly sentiments which have brought us here. Most fitting, too, would it have been that he should have presided to-night; for a great man befits a great occasion.

In truth, it is a great occasion which calls us together. When, at the end of a long and distinguished career, those who have labored with or alongside of a man; who have been his pupils, his associates, his colleagues; have striven for the same offices, have vied with him in generous rivalry, voluntarily meet to testify their friendship and to mark their approbation of his life, it is, indeed, a memorable event, not only to him, but to his calling. And we are giving all that we have to give. We cannot bestow on you an order of merit, such as a government in some countries might bestow. No ribbon of the Bath, no ensign of the Legion of Honor, no Iron Cross can be placed on your breast. Nor can we crown you with a civic crown, with its appropriate inscription *ob cives servatos*. Yet your crown of triple oak, accorded to you now by the representatives of your own profession, for a life of valuable services, will be no less a mark of preëminence because it will have to rest invisibly on your brow.

It is difficult, in your presence, to speak of the title you have to this and other distinctions without appearing to violate the canons of good taste. But you must look upon yourself as being with us on an occasion in which your claims are being summed up at the bar of American medicine—claims not alone for to-day, but for posterity; and in which the advocate may plead the more earnestly, because he feels the consciousness of an assured verdict.

Dr. Stillé has been distinguished in various capacities—as author, as professor, as worker for the common good of the profession.

Stillè, the author, has produced works, the learning and style of which are ornaments to American literature, and in whose pages discriminating judgment is as conspicuous as grace of language. The great treatise on *Therapeutics and Materia Medica*, has been described by a foreign journal as a work on medicine of a kind rarely seen, so ponderous in its dimensions, so fascinating in its contents.

Stillé, the professor, has been remarkable for the fulness and accuracy of his discourses; the eloquent denunciation of new names given to old things; the conscientious attempt to keep abreast of the times in an ever-widening subject; the admirable exposition of the matter; the clear, sonorous delivery. In the occupancy, for twenty years, by this scholarly physician, it is certain that a great chair—the chair of Rush, of Chapman, of Wood, of Pepper—has lost nothing of its fame.

As a worker for the common good of the profession, the efforts in the cause of medical education, the active interest in societies, recognized by having been chosen to the position of President of the County Medical Society, of the Pathological Society, of the American Medical Association, and, recently, of the College of Physicians, are conspicuous. It is not the least of his claims that he was very prominent, none more so, among the founders of the body which has done so much to bring the medical profession into unison—the American Medical Association. Nor must the generous giving of the bulk of his large library to the ancient University with which his name is indissolubly connected, remain unmentioned among his public-spirited acts. Many an aspiring student will become a lover of literature and of science through the thoughtful gift of this lover of books.

But, sir, it is not the author, the teacher, the worker for public objects only, whom we hold dear. If your titles were these alone, however much we might respect them, we should scarcely be here to honor you to-night. Better than Stillé the author, better than Stillé the teacher, better than all, is Stillé the man. No meretricious schemes to make gold jingle in soulless pockets attach to your name. A life of probity, a high sense of honor, uniform courtesy, have endeared you to us.

Such, then, are some of the titles to recognized distinction, in and out of American Medicine, which we gladly claim for you. That Medicine is now making for itself a more and more individual position. In every country there are those who are born old, and remain with eyes turned back to the past. Knowledge has no charms for them unless she is in wrinkles, and her joints creak, and her utterances are wheezy. There are those who stay as children, restless, full of enthusiasm, stumbling over everything, and eager for every change. Our national character furnishes but few of the former; and the traits of the latter are very greatly modified by what, besides quick perception of the useful, is a peculiarity of American Medicine, its thoroughly cosmopolitan nature. With the exception, perhaps, of one country, medicine is here more cosmopolitan than anywhere. And there is a growing love of original research, an increasing appreciation of pure literary work—as shown in the enthusiastic reception of the wonderful volumes in which brigades of folios, divisions of octavos, and army corps of pamphlets, are being placed into line under the direction of a marshal who is with us to-night—which bespeak a bright and most active future.

But it must be confessed that, as yet, some of this love of work, with the desire to instruct which comes with it, takes doubtful means of expression. For the advancement of the profession, it does not seem absolutely necessary that wherever a railroad opens a new country, and a prosperous little town attracts eight doctors, there should be at once two medical schools. Nor is it clear why the establishment of every post-office should quickly be followed by a fresh medical journal. And in these journals it is a little trying to him who endeavors to keep himself informed of the literature of the day, to find in six out of ten, articles to prove that opium will make you sleep, and is dangerous if too much be taken; that castor oil has purgative properties, and is not relished, especially by children; that it is difficult to prescribe for malarial diseases without using quinine; and that aloes is bitter and may gripe very unpleasantly. One might pardon some neglect in these lively authors to let their overflowing plethora of knowledge run off into the common stream.

Yet these are, after all, but temporary drawbacks in that great development which we all of us see so clearly, and hail with so much pleasure.

Honored guest: Be it in connection with the Medicine of our country, or, better, as a summary of your whole career, it seems not inappropriate to apply to you the words of Cicero: "*Omnia summa consecutus es, virtute duce, comite fortuna.*" If you have attained the highest rank, with virtue leading the way and fortune attending, it will so remain to the end. During the many years of vigorous life which we fervently hope are still before you; wherever you elect to pass these years, whether in the seclusion of your home and in lettered ease, or in visiting the scenes of former travel and early studies; in whatever clime; whatever skies may cover and sun shine on your path—with you will be the affectionate regards of those who surround you to-night, and of the far larger body of which we are only the temporary representatives; and you may know and feel that hundreds are joining now, and will always join us, in the wish: "Health and long life to Professor Alfred Stillé."

DR. STILLÉ, on rising, was greeted with prolonged and enthusiastic applause, and he spoke as follows:

Mr. Chairman and Gentlemen: The cordial welcome you have given me on this occasion, which I regard as one of the most important events of my life, and the terms in which you have expressed what you conceive to be the judgment of my professional brethren, would give me unalloyed pleasure were it not that I miss from this company the one to whom I am proud to acknowledge my debt for so great a distinction. He has gone to his endless rest, venerable for his years and resplendent with honors nobly won. I should be unjust to my own feelings did I fail to do that homage to his memory which is the only return it is possible for me to make for a long series of acts which were among the most grateful of all the commendations that my professional life received.

You, Mr. Chairman, have mentioned some of the posts of trust and honor confided to me at different times. All of them I owe to the unsolicited favor of my medical brethren, and I am proud to acknowledge it as the making of my history. Whatever I might have attempted, I should have achieved but little without their encouragement and approbation, and certainly never should I otherwise have reached that period of serene retrospection and repose which is the evening of a happy and not uneventful professional life.

This goodly company, these cheerful and hearty greetings, these glowing lights and festive ornaments that attend my retirement at the appointed period of three score years and ten, appear to me like the flowering of the plant that is fabled to bloom but once in a century, for all else in my professional career seems tame by comparison. The column, such as it was, that I endeavored to construct and rear in the temple of Esculapius has to-night been crowned with a capital on which is lavished all the elaborate ornamentation of the Corinthian style. I can only hope that the plainness of the structure will do no injustice to the richness of the decoration.

In looking from this eminence adown the road I have travelled since entering upon my professional studies, it is impossible for me to doubt that in men's lives apparent accidents may determine their course and issue. While still a medical student two of my fellow-townsmen returned from abroad glowing with the fire they had caught in Paris, the then acknowledged centre of medical science. Gerhard and Pennock were the apostles of the school of observation under whose preaching I became a zealous convert. As soon as it was possible I hastened to the enchanted scene of their European labors, to be stimulated still further by the recent memories of Jackson and Bowditch, and Holmes, of Boston, and to enjoy the salutary companionship of Dr. Shattuck, of Boston, who still survives, and is at my side to-night to do honor to his old friend and to your invitation. And there is still another before me, venerable in all that pertains to old age except its weaknesses—Medical Director Ruschenberger, U. S. N.—with whom I, at the end of two years, made my homeward voyage of six weeks' duration, and cemented a friendship that has survived the test of *tempus edax rerum*. It is not often given to a man to revive associations such as these, nor to feel that Time, which destroys so much, yet sometimes spares what is best in our experience of mankind.

During one of my summer holidays, while abroad, it was my lot—less vulgar then than now—to climb the Alps and observe the expedients used by the mountaineers in ascending the icy peaks. I noted the laborious industry with which they cut for themselves footholds on the slippery steep, and so mounted slowly but steadily to their destination. This method profoundly impressed me at the time, and I said to myself, "Surely in such wise must one hew his way to fame and fortune; and whether the point to be attained be the highest peak of all, or only some humbler hill-top by the way, it was clear that whatever else might win, *improbus labor omnia vincit*." What seemed revealed to me then among the sublime solitudes of nature, has been echoed by a thousand voices along the whole pathway of my life. It came to me also, like a voice from the tomb, in the words of an old family motto, *Innocenter, patienter, constanter*, and it was repeated in the history of all the men I have known who secured for themselves a steadfast place in their day and generation. I cannot doubt that in the bosom of every one who hears my voice there is felt a silent attestation of its truth. It has been the keynote of my teaching as well as the guide of my actions, and, therefore, how little soever of the good that has been attributed to me by your partial voices may in reality be mine, I owe it all to the lesson of steady industry and undaunted perseverance that I learned from the Alpine mountaineer.

And now let me simply add that "the crown of triple oak" which you crowned me withal to-night, will preserve its freshness through the remainder of my life, and will be preserved by those who succeed to my name as more precious than gold or jewels or any material badge of honor.

In response to the toast of "Our guests from abroad, who have honored us by their presence," DR. JOHN S. BILLINGS, U. S. A., said:

Permit me, in the first place, to express my high appreciation of the honor of being called on to respond for "the guests" on such an occasion as this. I do not, however, return thanks for the distinction, because there are good grounds for difference of opinion as to whether it is a matter to be thankful for, and one is apt to rise under such circumstances with something of the feelings which a very worthy man attributed to his wife who had died of consumption. Being asked by a sympathizing friend whether she had been resigned to the parting, he said, "Resigned! Why of course; certainly. She had to be."

In the second place, I wish to assure the "guests" of my sympathy in the regrets which each of them is about to feel when he hears his sentiments so poorly expressed, and when he thinks of what he would have said had he been in my place. Here, for instance, is our friend, Dr. Flint, who would have told you how all good New York physicians reverence Philadelphia for its conservative dignity in medical matters, low fees possibly excepted, and how glad they are to do honor to your general superiority by joining in this tribute to one of your most distinguished representative medical men.

I think I can even now see in our friend's face signs of regret that he did not accept the request to speak, as he thinks of how he might have impressed you with these sentiments.

However, the important uses of such dinners as these do not greatly depend upon the formal speeches. These last are, or at all events may be, very good things for those who listen to them, especially if their diaphragms are made to rustle a little, but we know pretty well what must be said in connection with the different toasts. The speaker is somewhat in the position of the rabbit which a certain western Munchausen declared was so hard pressed by his dog that he climbed a tree. "What!" said an incredulous listener, "a rabbit climb a tree." "Well," said Munchausen, "you see he was obleeged for to climb."

But the great use of such gatherings is in the civilizing and harmonizing influence which they have on those who attend them through the opportunities which they afford for making acquaintances and informal conversations.

A very large part of the unpleasantnesses of this world is due to people who are not found at social dinners. And of all gatherings of this sort it seems to me that such a one as has brought us here to night is among the pleasantest. Personal interests and ambitions are for the time being put aside and forgotten, and we join in honoring a man who has made his mark and won his place. It is a great privilege to be a guest upon such an occasion, and I am speaking for all your guests when I say that it is a privilege which in this special case we highly appreciate, and for which we return our sincere thanks.

To all physicians in this country Dr. Stillé's name is familiar, as that of a clear-headed, sensible speaker and writer who has observed and thought for himself, and at the same time has made extensive use of the resources of medical literature. He is one of the first American medical bibliographers. For these, and for other reasons which have been set forth by previous speakers, and because he has not written or spoken except when he really had something to say; because, also, we recognize his personal worth—the readiness which he has always displayed to promote the interests of Medicine

—we, your guests, hold ourselves as specially fortunate in being able to be present to indicate our appreciation of this rare combination, and to enjoy the great pleasure of meeting with our Philadelphia friends, so many of whom to most of us are almost like members of our own family.

DR. GEORGE C. SHATTUCK, of Boston, then said: I recognize, Mr. President, your kindness in inviting me to be present on this most interesting occasion, and to be an observer and a listener. Since coming into the room, I received an intimation that it had been assigned to me to say a few words as the intimate friend of Dr. Stillé. Now, we in Boston look up to Philadelphia as the medical metropolis, and then, though we are accused of thinking much of ourselves as the "Hub," yet we have lately been somewhat taken down. One of our *solid* men was missed from his place at an insurance office, and on returning after an interval of some days, was asked, "Where have you been, what are your experiences?" "Why, I have been," was the answer, "in the city of Chicago, and being introduced into a place like this, where many congregate, I was asked where I came from. On answering, Boston, one after another said they had never heard of the place, and finally one replied, 'I think I have heard of a small village somewhere on the coast of New England with that name.'" So I must thank you again for allowing one from so obscure a place to say a word in this assemblage of the medical men of Philadelphia.

Nearly fifty years have passed since Dr. Stillé and I were fellow-students and intimate friends. We were looking forward to our future life, professional and social, with anticipations of success, picturing what might be in store for us. And though the lines of our Boston professor of anatomy may be repeated by us, and we may say,

> "Where, oh! where are the joys of the morning,
> The hopes that illumined youth's prime?
> Gone, like tenants that quit without warning,
> Down the back-entry of time."

Yet how thankful should we be that our friend has been able to lead a life in accordance with many of his brightest hopes. He had a high ideal. His aspirations were for "whatsoever is true, whatsoever is honest, whatsoever is of good report," and he has led a life of devotion to duty, of successful, unremitting toil in reference to the good of all to whom he was called to minister. As a practitioner of medicine, as a teacher of medicine, as a writer on most important matters, how much good has he done; what an example has he given! In all, how mindful has he been of others, how steadily has he set aside self and selfishness, and kept before him his duties to others. A recent writer has remarked that in this country the individual is too prominent, self-exaltation and advancement are so much the motives to exertion. Our duty to work for the family, the State, the profession, is not sufficiently recognized. But we are met to-night to do honor to one who has worked for the profession, and who, in a life of many years, has striven to raise the tone of the profession, and to work and to store up knowledge for the benefit of others, that the whole medical profession may be the better for his labor and his acquisitions.

To excel in learning and in the communication of knowledge may be highly prized, for to many such talents are not given. And my friend is to be congratulated for having tried so well, and for receiving such tokens of the appreciation of his efforts from associates and friends of so many years. I am sure I join heartily in the good wishes for a prolongation of life, and of his powers of usefulness. We must all recognize that old age has its peculiar duties and responsibilities, and whilst we congratulate him at having accomplished so much, and at having so well earned a season of rest and repose, we must express a hope for continuance of life, for preservation of bounties; for we cannot spare him yet; his old friends are not yet done with him, nor can they consign him to inactivity and oblivion.

DR. AUSTIN FLINT being called upon, said:

Mr. President and Gentlemen: I am perfectly sincere in saying that I did not expect to be called upon to say anything to night. Feeling safe in this respect, I have enjoyed the dinner without any drawback. I am, moreover, glad to have the opportunity to express orally my heartfelt thanks for the invitation to be present on this occasion. I esteem it a great privilege to be permitted to join in expressing to our honored guest our appreciation of the services which he has rendered to medical literature by his valuable contributions, of his services in behalf of medical education by his teachings as a professor of medicine, and of the benefit which he has conferred on the medical profession by the purity of his professional and private life.

I congratulate him cordially on his retirement from his arduous professorial duties. Trusting that he may long have life, health, and vigor, I will express the hope that his pen will not be idle, and that we may expect from him further valuable contributions to American medical literature.

It was my good fortune to be a guest at a dinner in this place somewhat over a year ago, on an occasion of which I shall always cherish the most grateful recollection. On that occasion, the seat which I occupy to night, was occupied by one whom we all miss on the present occasion. I should not make this allusion if I supposed it would cast a gloom over this meeting. It should not. The departure to another world of one ripe in years, who has lived a useful life, and who goes laden with those riches of the mind and heart, which, as we may believe, are carried beyond the grave, is not to be regarded in the light of a calamity, except as regards the deprivation of those who remain. It is pleasant to think that, although of the body of our beloved friend only his ashes are left with us, he still lives, and that he may be in some way cognizant of the events in this world. He may be cognizant of this meeting, and, if so, I know from my intimate friendship for many years, that he yearns to make known to us how thoroughly he is in sympathy with our present enjoyment, and with the special object which has brought us together.

After a few remarks by Dr. Pepper, and the reading of a number of letters of regrets from invited guests who were unable to be present, "the loving cup" was passed, and the festivities were concluded.

BRUNSWICK, ME.

(From our Special Correspondent.)

MAINE MEDICAL SCHOOL; GRADUATING EXERCISES AT BRUNSWICK.—The close of the sixty-third course of lectures was marked by more formal exercises than customary, and by the first annual meeting of the Alumni.

The graduating exercises in Memorial Hall, at 9 o'clock A.M., consisted of an address by Prof. S. G. Brown, of Bowdoin College (late of Hamilton), a parting address by a member of the graduating class, the presentation of diplomas by the President of the College, Prof. Packard, and singing of a class ode. At noon occurred the first annual meeting of the Alumni, and notwithstanding a heavy rain-storm, members were present from all over New England.

The President, Dr. F. C. Thayer, of Waterville, congratulated the Association upon having made itself an assured success, and alluded briefly to the purpose for which it was organized—to coöperate with the Faculty and government of the School in securing its material advancement by enlarging its clinical facilities, through a change of location. An addition is needed to the chairs of instruction, and the Alumni were urged to lend their cordial aid in bringing about these desired improvements, by establishing an Alumni Fund. A committee was appointed to consider these recommendations, and subsequently reported in favor of the appointment of a committee to confer with the Faculty of the School, and report at the next annual meeting of the Association.

The President appointed Dr. O. A. Horr, of Lewiston; Dr. E. M. Fuller, of Bath; and Dr. H. H. Hunt, of Portland.

The Nominating Committee reported, recommending the reëlection of the present officers, as follows:

President.—Dr. F. C. Thayer, of Waterville.

Vice-Presidents.—Dr. S. Laughton, of Bangor, and Dr. R. D. Bibber, of Bath.

Secretary.—Dr. C. D. Smith, of Portland.

Treasurer.—Dr. F. H. Gerrish, of Portland.

Dr. A. F. Fuller, of Bath, then delivered an address, at the close of which the meeting adjourned, and, with invited guests, to the number of one hundred and eight, sat down to a banquet in the lower hall.

The afternoon was passed by the members in visiting the medical building, the Seavy Anatomical Cabinet, and the various college buildings. During the evening, the class of 1869 held a reunion at the Tontine Hotel.

The attendance upon the meeting far exceeded the most sanguine expectations, scattered as the graduates of this school are over all sections of the country. The Association is now firmly established, and all graduates to whose notice this may come are earnestly requested to join hands in promoting the prosperity of the School and the fraternity of the graduates.

Any information relative to the alumni, such as correct address, death, change of location, or applications for membership, may be forwarded to the Secretary, Dr. Charles D. Smith, 17 Brown Street, Portland, Me., and the interests of the Association will be thereby greatly promoted.

HOSPITAL COLLEGE OF MEDICINE.—The annual commencement of the Hospital College of Medicine of Louisville was held on May 29th. The degree of M.D. was conferred upon thirty-one graduates.

AMERICAN NEUROLOGICAL ASSOCIATION will hold its tenth annual meeting in the Hall of the Academy of Medicine on June 18, 19, and 20. The following papers are promised: "On Encephalic Nomenclature," by Dr. Burt G. Wilder; "A Study of the Etiology of Tabes Dorsalis with Special Reference to the Efficiency of Syphilis," by Dr. E. C. Seguin; "Basedow's Disease," by Dr. A. D. Rockwell; "Can Locomotor Ataxia be Cured?" by Dr. G. M. Hammond; "Multiple Neuritis," by Dr. S. G. Webber; "A Case of Word-deafness and Blindness, without Paralysis," by Dr. R. W. Amidon; "The Effect of Injuries of the Spinal Cord upon the Excretion of Carbonic Anhydride," by Dr. Isaac Ott; "A Contribution to the Study of Hysteria as Bearing on the Question of Oöphorectomy," by Dr. G. L. Walton; "Typical Hysterical Symptoms in Men due to Injury, and their Medico-legal Significance," by Dr. James J. Putnam.

NEW JERSEY STATE MEDICAL SOCIETY.—At the annual meeting of this Society, held at Cape May, on June 10th and 11th, the following officers were elected for the ensuing year:

President.—P. C. Baker, M.D., of Morristown.

Vice-Presidents.—Drs. Joseph Parrish, of Burlington; Charles J. Kipp, of Newark; and J. W. Ward, of Trenton.

Corresponding Secretary.—Dr. William Elmer, Jr., of Trenton.

Recording Secretary.—Dr. William Pierson, Jr., of Orange.

Treasurer.—Dr. W. W. L. Phillips, of Trenton.

PUBLIC BEQUESTS OF THE LATE PROF. S. D. GROSS.—The will of the late Dr. Gross has been admitted to probate, and contains the following public bequests:

"I give and bequeath my medical library, my museum, and diagrams, to one of the following institutions: The Jefferson Medical College, or the Philadelphia Academy of Surgery, or the College of Physicians of Philadelphia, the choice of said institution to be made by my executor, in his free and uncontrolled discretion; provided, however, that such institution so accepting shall furnish a fire-proof apartment for my medical library and shall call it the Samuel D. Gross Library. If the institution so chosen does not accept this bequest, then I leave it to one of the following: The University of Pennsylvania or the New York Academy of Medicine; also to be made at the selection of the executor, and with the same provision as above.

"I give and bequeath to one of the following institutions—The Jefferson Medical College of Philadelphia, Academy of Surgery, or College of Physicians of Philadelphia, the choice of said institution to be made by my executor in his free and uncontrolled discretion—the sum of $5000, the principal of which is to be invested by said institution as a permanent fund, and the accumulated interest or income therefrom arising to be paid every five years to the writer of the best original essay, not exceeding 150 printed pages octavo in length, illustrative of some subject in surgical pathology or surgical practice founded upon original investigation; the candi-

dates for the prize, which is to be called the Samuel D. Gross Prize, to be American citizens."

In a codicil he provides "That all my medical books, with the exception of those mentioned in my will, and also my office bookcases, be given to the Philadelphia Academy of Surgery, in trust, to be held by it so long as it shall exist as an independent and distinct organization. At the end of that time I decree that they shall be given to the College of Physicians of Philadelphia, or to any respectable or permanent institution that the Academy may select for the purpose, my children, if any survive, also having a voice in the choice."

The executor, Mr. A. Haller Gross, has tendered, under the terms of the will, the library and prize to the Philadelphia Academy of Surgery, and this body has accepted the trusts, and has arranged with the College of Physicians of Philadelphia for the deposit of the books in the Library of the College to be used in accordance with the general rules governing the College Library.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION will hold its next meeting in Springfield, Illinois, in September, 1884.

THIRD CONGRESS OF THE ITALIAN SURGICAL SOCIETY.—The third Congress of the Italian Surgical Society will be held in Turin on the 15th to the 20th of September, 1884. The secretaries are DRS. G. NOVARO and G. BERRUTI, of Turin.

NEW JOURNALS.—Three new periodicals have recently appeared in Madrid. The *Archivos de Ginecologia y Enfermedades de la Infancia* is a monthly; the *Diario Medico-farmaceutico* appears every four days; and *Dr. Sangrado*, a satirical review, has appeared every fifth day since November.

DR. ROBERT KOCH.—A newspaper sketch of the distinguished discoverer of the bacillus of tubercle and of cholera, describes him as a man of medium height, thin, gray-haired, with a serious, spiritual countenance. He looks much older than he is—forty-one.

THE DWIGHT INSURANCE CASE.—A telegram from Norwich states that the Mutual Benefit Life Insurance Company of New Jersey, has just paid the two policies of insurance of $5000 each, which were taken out by the late Col. Walton Dwight.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 3 TO JUNE 9, 1884.

THE ARMY MEDICAL EXAMINING BOARD, New York City, is dissolved, to take effect June 14, 1884.

BROWN, JOS. B., *Lieutenant Colonel and Surgeon.*—Upon completion of the business of the A. M. B., directed to comply with S. O. 44, current service, A. G. O., and return to New York City.

CLEMENTS, BENNETT A., *Major and Surgeon.*—Directed to await orders in New York City.

KIMBALL, JAMES P., *Captain and Assistant Surgeon.*—Granted leave of absence for two months and fourteen days, to take effect June 14, 1884, and ordered to relieve, August 28, 1884, Captain Robert H. White, Assistant Surgeon, from duty at U. S. Military Academy, West Point, N. Y.

CAPTAIN WHITE, on being relieved, ordered to report in person to the Commanding General, Department of California, for assignment to duty.

STERNBERG, GEO. M., *Major and Surgeon.*—Relieved from temporary duty in S. G. O., and ordered to assume the duties of Attending Surgeon and Examiner of recruits, at Baltimore, Md.—*S. O. 131, A. G. O.*, June 6, 1884.

FINLEY, J. A., *Captain and Assistant Surgeon.*—Relieved from duty at Fort Stockton, Texas, and assigned to duty as Post Surgeon, Fort Concho, Texas.—*Par. 4, S. O. 69, Headquarters Department of Texas*, June 2, 1884.

MOORE, JOHN, *Lieutenant-Colonel and Assistant Medical Purveyor.*—Ordered to perform, in addition to his present duties, those of Medical Storekeeper, San Francisco, Cal.

JOHNSON, HENRY, *Captain and Medical Storekeeper.*—Relieved from duty at the Medical Purveying Depot at San Francisco, Cal., and ordered to report for duty at the Medical Purveying Depot, New York City, relieving Captain Andrew V. Cherbonnier, Medical Storekeeper.

CAPTAIN CHERBONNIER, on being relieved by Captain Johnson, will proceed to St. Louis, Mo., and report in person to Captain Geo. T. Beall, Medical Storekeeper and Acting Assistant Medical Purveyor, for duty at the Purveying Depot at St. Louis, relieving Captain Beall of his duties as Medical Storekeeper.—*Par. 9, S. O. 128, A. G. O.*, June 3, 1884.

FRYER, BLENCOWE E., *Major and Surgeon.*—Granted leave of absence for one year, from July 1, 1884.—*Par. 7, S. O. 128, A. G. O.*, June 3, 1884.

HALL, JOHN D., *Captain and Assistant Surgeon.*—Granted leave of absence for three months, to take effect on his arrival at St. Paul, Minn.—*Par. 8, S. O. 128, A. G. O.*, June 3, 1884.

HEGER, ANTHONY, *Major and Surgeon.*—Assigned to duty at Fort McHenry, Md., as Post Surgeon.—*Par. 1, S. O. 108, Headquarters Department of the East*, June 2, 1884.

HUNTINGTON, DAVID L., *Major and Surgeon.*—During the absence of the Surgeon-General, directed to take charge of the Office of the Surgeon-General and perform his duties.—*Par. 6, S. O. 129, A. G. O.*, June 4, 1884.

BENTLEY, EDWIN, *Major and Surgeon.*—Assigned to duty at Fort Clark, Texas, as Post Surgeon.—*Par. 1, S. O. 68, Headquarters Department of Texas*, May 31, 1884.

KOERPER, EGAN A., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Keogh, M. T.—*Par. 1, S. O. 58, Headquarters Department of Dakota*, May 27, 1884.

BARNETT, RICHARDS, *Captain and Assistant Surgeon.*—Now on sick leave of absence, is relieved from duty at Columbus Barracks, Ohio, and ordered to report to Commanding General, Department of the East, for assignment to duty.—*Par. 2, S. O. 129, A. G. O.*, June 4, 1884.

CUNINGHAM, T. A., *Captain and Assistant Surgeon.*—Ordered to relieve Assistant Surgeon C. B. Byrne, U. S. A., from duty at Fort Lewis, Col. Assistant Surgeon Byrne, when so relieved, ordered to proceed to Fort Gibson, I. T., and report to the Post Commander for duty.—*Par. 2, S. O. 112, Headquarters Department of Missouri*, June 4, 1884.

BANISTER, J. M., *First Lieutenant and Assistant Surgeon.*—Granted leave of absence for one month and seven days, to commence June 13.—*S. O. 22, Headquarters Division of the Atlantic*, June 5, 1884.

MCCREERY, GEO., *First Lieutenant and Assistant Surgeon.*—Granted leave of absence for two months with permission to apply to the Adjutant General of the Army for two months extension.—*Par. 3, S. O. 56, Headquarters Division of Missouri*, June 5, 1884.

WILSON, GEO. F., *First Lieutenant and Assistant Surgeon.*—Relieved from temporary duty at Fort Canby, Washington Territory, and ordered to return to his proper station (Fort Walla Walla, Washington Territory).—*Par. 2, S. O. 70, Headquarters Department of Colorado*, May 26, 1884.

OWEN, WM. O. JR., *First Lieutenant and Assistant Surgeon.*—Having reported at these Headquarters in compliance with Par. 5, Department Special Orders, No. 62, current series, will return to, and take station at Fort Stevens, Oregon.

In addition to his duties at Fort Stevens, Assistant Surgeon Owen will perform those of Medical Officer at Fort Canby, Washington Territory.—*Par. 1, S. O. 70, Headquarters Department of Colorado*, May 26, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

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ORIGINAL ARTICLES.

A PLEA FOR MORE HEROIC SURGICAL INTERFERENCE IN AFFECTIONS OF THE BRAIN.[1]

BY R. W. AMIDON, M.D.,
OF NEW YORK.

THE question must arise in the mind of one watching the progress of medical science and practice, Why is it that since Broca, in 1871, guided by well-determined anatomical and physiological laws, trephined a paralyzed aphasic over the centre for speech and greatly relieved the symptoms by evacuating a cerebral abscess, Why is it, that in the succeeding thirteen years, similar operations scientifically planned and executed, are so seldom performed, and they hardly reach a score. One answer, perhaps the chief one, lies in this fact, that probably neither before nor since has there been joined in one man such anatomical and physiological knowledge of the nervous system, with such surgical skill and daring as existed in the lamented Broca. He was a man who devoted his time *entirely* to science, study, laboratory work and his hospital service; early every morning he spent hours in his wards at Hôpital Necker, encased in a black cambric gown, ready for anything, followed always by a throng of eager students.

It was he who localized the centre for articulate speech, thus opening up the wonderful realms of cerebral localization; it was he who first accurately pointed out the relations of certain important cerebral convolutions to fixed external landmarks, thus making the brain visible through its opaque envelopes, and it was he whose hand, guided by these scientific data, drove the trephine directly toward a hidden cerebral abscess.

Surgeons may well admire his daring, neurologists his learning. That such an example has almost fallen to the ground in the past thirteen years cannot be attributed to inaction, for, during those years, surgical science has made wonderful onward strides, nor have physiologists allowed the expanse of the cerebral cortex to remain unexplored, but specialism has compelled the surgeon to neglect his study of cerebral anatomy and physiology while the neurologist, even if he possess the requisite surgical skill, lacks the material upon which to test his knowledge. Deplorable indeed is that overfine subdivision of practice which allows *one* physician to cling to obsolete methods, *another* to soar in a cloud of unproven theories, while the poor patient gets well if he can.

Another very serious drawback to the advance of cerebral surgery has been the tenacity with which surgeons have clung to the idea that trephining of itself is a dangerous operation. To prove that penetrating the envelopes of the brain is *not* a dangerous operation, will occupy the first and larger part of this paper, for this proved will remove the greatest objection that can be offered to more heroic cerebral surgery.

The operation of trephining is very old, and is practised by all races. In France, among débris belonging to the neolithic age, with vessels, utensils, and weapons of stone, are found skulls having smooth, oval, and bevelled edged holes, which were undoubtedly made during life and for a special purpose.[1]

For an operation of such extreme antiquity accurate data as to its safety are extremely meagre. Our modern treatises on surgery are surprisingly wanting in statistics. Judging from their figures, the operation is indeed a dangerous one, its mortality varying, according to them, from forty to seventy-five per cent. The deductions one would naturally draw from these statements and figures are fallacious, for the reason that many of these deaths occurred from lesions which antedated the operation, lesions which would of themselves have ultimately caused death. They do not attempt to ascertain in what percentage of cases the operation excites the fatal issue.

The nearest approach to an estimation of the exact mortality of the operation appeared in *St. Bartholomew's Hospital Reports* for 1882, vol. xviii. p. 213. In an article entitled "Is trephining the skull a dangerous operation *per se?*" Dr. Walsham has looked up and analyzed six hundred and eighty-six cases in which, for different purposes, the cranial cavity has been opened or explored, not using the word "trephining" in its strict sense. Of these six hundred and eighty-six, four hundred and seventeen survived, showing thus a mortality of 39.3 per cent. He divides these cases into five classes: First, preventive trephining, in which there were no cerebral symptoms, but in almost all a compound fracture of the skull existed. Here the mortality was 21.9 per cent. Second, immediate curative trephining, in which severe cerebral symptoms existed. Here 48.4 per cent. died. Third, intermediate curative trephining, in which cerebral symptoms were present. Here twenty-seven per cent. died. Fourth, delayed trephining where generally inflammatory symptoms had set in. Here 58.5 per cent. died. Fifth, late trephining, in which 22 per cent. died.

Of the latter class, in which there were not at the time of operating any symptoms liable to prove fatal, there were over eighty cases in which no wound existed in the head at the time; of these 14.4 per cent. died, and of forty cases in which there was a fistulous track leading down to dead bone or a purulent collection within the cranium, only 2.5 per cent. died.

He thus estimates that in one hundred and twenty-two cases of late trephining, in which there was present at the time no condition endangering life, only 10.6 per cent. died.

[1] Read before the New York Academy of Medicine, June 5, 1884.

[1] Prunieres, Bull. de la Soc. d'Anthropol., de Paris, 1878, p. 420.

In a later article (*St. Bartholomew's Hospital Reports* for 1883, vol. xix. p. 127, "On trephining the skull in traumatic epilepsy,") he cites eighty-four cases, of which seventeen died, showing a mortality of 20.2 per cent. But he adds that if we except deaths following too long after the trephining to be attributed to the operation, we would see that here too the mortality would be reduced to about 10.6 per cent.

The fairness of Walsham's deductions no one reading his article can doubt, but favorable as his figures are as compared with those of succeeding writers, I think that his percentage of 10.6 as the mortality of the operation *per se* is too high, and I base my statement on the following fact, viz., that while his tables contain *very many* recent cases, they contain more cases which antedate antiseptic surgery. No one for a moment doubts that since the introduction of Listerism, fatal results follow accidental or surgical traumatism much less frequently than before. Particularly is this the case in wounds involving bone. For this reason Walsham's tables are not exact exponents of the results of modern surgery.

In the last few days I have collected one hundred cases in which trephining or kindred operations about the head have been performed for various causes, taking care to select cases treated and reported since 1879, since Listerism has come into general use. Not, however, confining myself to cases in which the Lister dressing was used.

These cases I have not subdivided into classes, as did Walsham, but have tabulated so as to show the injury or pathological condition present, the prominent symptoms preceding and following the operation, the kind of operation and its findings, the dressing or subsequent treatment of the wound, and the final result. From these data it has been possible for me to arrive at pretty conclusive evidence as to the mortality of the operation *per se* as looked at in the light of modern surgery.

Of these one hundred cases taken just as they came in medical journals, since 1879, twenty-six died. Of these twenty-six, twenty-three presented, at the time of operation, symptoms endangering life, thus leaving only three cases in which the fatal issue could even remotely be traced to the operation.

As this percentage seems extremely low and would render the operation as now conducted practically harmless, it may be well to summarize the reasons for rejecting the twenty-three deaths as independent of the operation.

In six cases symptoms of abscess of the brain declared themselves before the operation was performed. In four a meningitis existed at the time of operation. In four cases shock caused death; one died of hemorrhage from a branch of the middle meningeal artery (not wounded in the operation); one died of hemorrhage from the middle cerebral artery, severed by a stab-wound of the head; one died of hemorrhage from a lacerated longitudinal sinus; one of galloping consumption, which was hereditary; one of extensive laceration of the brain; one of opium poisoning; and three I accept, on authority of the physician reporting them, as not dying from the effects of the operation. The cases in which the operation seemed to cause death being so few, will be mentioned more in detail.

The first was one reported by Sylvestrini.[1]

The subject was a male, of fifteen, who received the kick of a horse in the right temporo-frontal region. Two months after the injury the boy had a temporary right hemiplegia. Five months later paralysis of the right arm and leg and the lower part of the right side of the face came on. This was accompanied by right hemiepilepsy and complete aphasia, incontinence of urine and feces. Sylvestrini trephined over the centres for the upper and lower extremities, and extracted piecemeal a hard, organized clot, three centimetres in diameter by one thick. Death occurred on the fourth day. On autopsy, there was found to have been a purulent meningitis and two abscesses of the brain, one at the foot of the ascending frontal convolution, and one under the inferior extremity of the fissure of Rolando.

There is a doubt as to whether the operation in this case had, after all, much to do with the fatal result. The symptoms preceding the operation were certainly of a very grave nature, and, considering their slow formation, the cerebral abscesses may well have existed before the operation, in which case the facial paralysis and aphasia could very easily be accounted for, and the fatal issue explained. Still, in the operation of removing an organized clot from an otherwise healthy brain, sufficient violence might have been done the parts to excite the fatal suppurative inflammation.

The second case in which the operation may have caused death is reported by Briddon.[2]

The subject was a male, of sixty-one. A brick fell on his head, causing a compound depressed fracture, four centimetres long, a little to the right of the vertex. The depressed bone was removed, and the margins of the wound were smoothed with a rongeur. The wound was dressed with *proof spirit*. On the third day after the operation the patient had a chill, fever, headache, and photophobia. On the sixth day vomiting and stupor occurred. On the eighth day the dura mater was incised, and a little pus and blood evacuated. On the ninth day there was a chill, with involuntary evacuations, twitchings of the face, and death. On autopsy, there was found a false membrane adherent to the left hemisphere, and an accumulation of greenish pus in the arachnoid.

The fatal issue, if it did not arise from natural and unavoidable causes, *might* have come from the surgical dressing in this case. But the injury itself—so apt to excite fatal intracranial inflammation—may alone be responsible for the fatal result. Certainly the operation, promptly, neatly, and judiciously performed, did not cause death.

The third case is that reported by Noyes.[3]

A male of nineteen received the entire breech-pin of an exploding gun in his right orbit. The breech-pin was afterward found to have projected four centimetres through the roof of the orbit into the right frontal lobe of the brain. The boy was insensible four days, but soon recovered almost perfectly, with the exception of

[1] Bull. de l'Acad. de Méd. de Paris, 1883, 439.
[2] N. Y. Med. Journ., 1879, xxix. 309.
[3] Amer. Journ. Méd. Sci., 1882, lxxxiv. 45.

a destruction of the right eye, and a fistulous track which led down to the foreign body. It was not dreamed then that it had penetrated the brain. The foreign body was found and much force was required to dislodge it from the roof of the orbit and brain.

Sixteen days later, left hemiparesis and other symptoms led to trephining about 7.5 centimetres above the right external angular process of the frontal bone, the supposition being that a secondary abscess had formed there. About twenty cc. of dark purulent matter were evacuated by an aspirator needle. A probe and drainage-tube were passed through the brain to the opening in the roof of the orbit. This was syringed out with a four per cent solution of boracic acid. On the twenty-seventh day there was double optic neuritis (tendency to choked disk having been previously noticed). On the thirty-seventh day the finger was passed eight centimetres through the roof of the orbit, and the brain found badly disorganized. Death occurred on the thirty-ninth day after the operation, and the sixth month after the injury.

On autopsy there was found an immense cavity in the right frontal lobe, but neither this nor the external wounds communicated with the subdural cavity.

There was a basilar meningitis, or, as the author puts it, "a sero-purulent, yellowish-green exudation into the meshes of the pia mater, most abundant over the medulla oblongata, pons, interpeduncular space, and inner parts of the fissures of Sylvius. This exudation is as much on one side of the brain as the other, and does not extend to the convexity."

In this very interesting case the surgical interference probably hastened the fatal issue. It was stated in the history of the case that one day there was discharged from the orbital opening a membrane which had doubtless formed an encapsulating sheath for the part of the foreign body which projected into the brain. For this reason, and because of the absence for so long a time of any cerebral symptoms, it is possible that this boy might have lived for years. It would seem, however, that the basilar meningitis was entirely independent of the operation because of the inability of any injected fluid, or any discharge from the cerebral abscess, to gain access to the base of the brain. This patient took daily from 120 to 150 centigrammes of quinine, and there is a possibility that that *may* have had something to do with the fatal issue.

These three cases show the tremendous difficulty of determining with exactness the part operative interference has in the production of death. But, to recapitulate, a careful review of the cases collected shows that, of one hundred unselected cases, twenty-six died; but that in twenty-three, there existed, at the time of operation, symptoms which of themselves endangered life, thus leaving for the operation *per se* a mortality of 3 per cent. This certainly should rob the operation of its terrors.

The introduction of three interesting cases at this point may show what extensive injury to the cranial bone may be recovered from.

In a case of syphilitic necrosis there was removed the frontal part of the frontal bone, the roof of both orbits, the cribriform plate of the ethmoid, parts of both superior maxillæ, the palate, and left greater wing of the sphenoid, without any untoward symptoms occurring.[1]

[1] Norton, Trans. Clin. Soc. Lond., 1880, xiii. 48.

McCutcheon[1] narrates a remarkable case in which he trephined five consecutive times.

The patient, an adult male, received a blow near the occipital protuberance. Six weeks of blindness supervened, which disappeared after trephining. Later, after the wound had all healed, symptoms of compression came on, which yielded to a second operation. Epilepsy appeared after a period of apparent cure. The third operation was successful. Atrocious headaches soon led to a fourth operation; while later, necrosed bone necessitated a fifth and last operation.

A man had his head caught between the timbers of a bridge and the boiler of a steamboat going at a rapid rate. The frontal bone was torn off at its lower border and raised up five centimetres. It could be raised and lowered like the lid of a box, the scalp and coronal suture acting like a hinge. The anterior lobes of the brain were elevated 1.5 centimetres. The bones of both orbits and upper part of the nose were crushed; one piece was driven into the brain, which was much lacerated. Seven fragments were removed, including the roof of both orbits, the septum between the eyes, and some of the nasal bones. A portion of the right temporal bone was crushed in, and there was a compound depressed fracture of the left parietal bone four centimetres long. Much lacerated cerebral substance was lost. Clotted blood and débris were removed, the frontal bone was adjusted, and drainage secured. Convalescence was marked by an immense discharge of serum and pus. Recovery was perfect as regards mental and physical condition, but there remained impairment of vision in the left eye, diplopia, impairment of hearing in the left ear, and a total loss of the sense of smell.[2]

The reluctance of the surgeon to open the cranium seems avidity as compared with his hesitation in piercing the dura mater. The protection afforded by antiseptic precautions has long since thrown down the barrier of other serous sacs, and now every day closed serous or synovial cavities are invaded for diseases not immediately endangering life. Not so with the sac surrounding the brain. The dura is not very vascular, nor does it easily take on ordinary inflammatory processes.

Vessels prone to dilate and allow transudation and exudation are just as readily made to contract by local or systemic treatment. The same readiness of the pia mater to become acutely inflamed, also renders it peculiarly sensitive to prophylactic or remedial measures.

Of the hundred cases which I have collected, the dura mater was opened in thirty-three. In twenty-three the dura was lacerated by the traumatism, of these nine, or 39 per cent., died. In ten cases the dura was purposely opened during the operation, and of these four, or 40 per cent., died.

This would seem to indicate that opening the dura mater led to fatal results in 39.3 per cent. of all cases, but when we pause to consider that opening of the dura during the traumatism is in most cases accompanied by laceration of the brain, hemorrhage, and often the introduction of foreign bodies, and that intentional exposure of the brain is seldom resorted to until dangerous inflammatory processes are already at work, we will find that this explorative

[1] New Orleans Med. and Surg. Journ., 1881, ix. 259.

[2] Palmer, Trans. Med. Assoc. of Wisconsin, 1880, xiv. 59.

procedure is, if not harmless, at least not fatal in 39.3 per cent. of cases.

Of the nine fatal cases in which the dura was opened traumatically, four died of extensive laceration of the brain and shock, two died from hemorrhage, one from the middle meningeal, one from the middle cerebral artery, and one died from opium. Of the four fatal cases in which the dura was intentionally opened, three already presented lesions of diffuse or circumscribed suppurative inflammation. In *one* case only, that of Sylvestrini, did the membranes, healthy when first opened, subsequently take on a fatal inflammation. Thus we see that of the thirteen fatal cases, in only one could death be traced to exposing the brain. This reduces the mortality of the operation to 7.6 per cent.

It is exceedingly exasperating that Sylvestrini neglects to state what dressing he employed or whether he did or did not conduct the operation with antiseptic precautions.

The surgeon who boldly trephines the skull, and then hesitatingly and after mature deliberation opens the dura, will generally draw back, lay down his instruments and refuse to go further when he reaches the brain. It is not because he considers it such a vital organ, for he knows full well that large areas of the brain are less essential to life than are the less noble organs, the heart, lungs, liver, and kidneys. Neither is it because he thinks it incapable of sustaining shock or taking on reparative processes, because he has seen it entirely recover from tremendous traumatisms, he has watched it granulate and cicatrize like any other wounded part. The cerebral cortex seems to be a sort of "dead line" inside the prison walls of conservative surgery, across which even the most daring are tempted or the most unwilling are dragged only by sure indications or desperate chances. Let us see how much foundation, in fact, there is for the sacredness in which the cerebrum is held. Leaving one side the older, but remarkable cases, such as the celebrated tamping-iron case of Drs. Harlow and Bigelow, we will cite more recent instances which demonstrate the toleration and reparative power of the brain.

A male, of thirty-one, received a punctured wound from a file which fell some distance, striking him at the posterior superior angle of the right parietal bone. Three days later, headache, delirium, and slight left hemiplegia came on. One month after the injury he was trephined, the dura was punctured and pus escaped in jets. He was discharged cured in two months. Nine months later convulsions and left hemiplegia returned. The old wound was reopened; this operation simply affording relief. Seven months later, headache came on, followed in a few days by convulsions. Speech and vision were impaired. The removal of a small piece of dead bone afforded no improvement. In four months the case came again under notice, with left hemiplegia most marked in the leg and double optic neuritis. Another small piece of dead bone was taken out.

The old trephine hole was enlarged, the dura punctured and pus escaped in jets. About 250 cc. escaped during the night. A director was passed five centimetres into the brain. After the pus was evacuated, the patient walked and moved the left arm and fingers freely, and speech was not so thick. One month after the operation, the headache returned and a convulsion occurred. At the same time the discharge from the wound increased. In fifteen days the wound healed, and in thirty days the patient was discharged cured, two months after the last operation, and sixteen months after the injury.[1]

Bullet weighing 2.5 grammes, entered five centimetres above eyebrows and one centimetre to the left of the median line. Of its own weight, probe went back its whole length toward the occiput. Free drainage was secured and carbolized oil was used as a dressing. The left optic nerve was swollen. On fourth day, when almost well, rigors and violent pain in the wound set in. Pulse 100; temperature 40.5° C. Unconsciousness, wild delirium, vomiting, and slight right facial paresis. Recovery without operation on seventy-fourth day.[2]

A bullet entering at point about four centimetres above the left eye a little to the left of the median line, pierced the first frontal convolution, traversed the brain backwards and a little outwards, and emerged from the upper part of the parietal lobule, where it lay slightly imbedded in the brain. The symptoms were not alarming. The course of the bullet was ascertained by careful probing, and the trephine was applied over the supposed site of the ball. After a short search it was found, and a drainage apparatus composed of horse-hair and catgut passed through the entire track of the ball. The operation was done with antiseptic precautions, and the wounds were dressed with iodoform. Recovery was uninterrupted and complete. The slight weakness of the right hand and loss of memory rapidly disappeared.[3]

The whole of the right parietal, parts of the right occipital, temporal, and left parietal bones being torn away with extensive laceration and loss of cerebral substance, the case was treated antiseptically without operation and recovered perfectly.[4]

A man was struck by the pilot of an engine and his head was cut open from the inner canthus of the left eye to the occiput. A furrow eight centimetres long was cut in the anterior lobe of the left hemisphere. Under cold applications he recovered.[5]

A boy of six years was stepped on by a horse. The left side of the head was crushed in, blood, bone, and brain escaping. Blood and pieces of brain exuded from left ear. It was estimated that sixty-two cc. of cerebral substance were lost. There were three compound fractures. There was a right hemiplegia which disappeared and an aphasia which improved.[6]

A boy of fourteen, was struck on the head by a stone weighing five kilogrammes. A large hematoma formed, which was opened; bone to the extent of 7.5 x 6.5 centimetres was removed, and thirty grammes of clear cerebral substance were saved. A carbolic dressing was used. Later, a large hernia cerebri formed and was cut off. Recovery took place without paralysis.[7]

A man of thirty-nine, fell fourteen metres, causing a slight wound in the right fronto-parietal region. Ten months later, convulsions and paralysis set in. A fissured fracture was found three centimetres long along the Rolandic line. The skull was trephined and the dura opened. Blood and cerebro-spinal fluid escaped, and the cortex was found disorganized over a considerable extent for a depth of many millimetres. Recovery with disappearance of the paralysis supervened.[8]

[1] Rivington, Brain, 1881 and 1882, iv. 413.
[2] Barton, Lancet, 1881, i. 248.
[3] Case of Dr. Wm. F. Fluhrer, unpublished. Quoted by permission.
[4] Olpherts, Br. Med. Journ., 1882, ii. 89.
[5] Wood, Amer. Journ. Med. Sci., 1881, lxxxii. 168.
[6] Hoskins, Lancet, 1883, ii. 99.
[7] Benton, Proc. Med. Soc., Co. Kings, 1883-84. viii. 256.
[8] Demons, Bull. et Mém. de la Soc. de Chir., 1883, iv. 482.

Adding to these traumatic cases the numerous instances in which immense hemorrhages, large areas of softening, stupendous and multiple abscess cavities, and rapidly growing neoplasms compress or usurp the place of parts of the brain without disturbing the vital functions and often without destroying life, we must conclude that the brain shows a remarkable tolerance of injury and a tremendous reparative power.

The chapter in cranio-cerebral topography which will be found of most utility for clinical and experimental purposes, is the part dealing with the relations borne by individual convolutions, not to the denuded skull, but to the external landmarks demonstrable on the living head. To this part special attention will be paid, the facts being chiefly drawn from Broca, Féré, and Turner.

To make all observations uniform, the head must have a constant position. This position is that which is assumed by a skull, without the inferior maxilla, resting on its alveolar processes and occipital bone. This is called the alveolo-condyloid plane, and forms the basis for all future measurements. A perpendicular from this line passing through the external auditory meatus, intersects the vertex at a point called the bregma. This is called the auriculo-bregmatic line. The most important landmark in the brain is the fissure of Rolando. Its upper extremity lies 4.5 centimetres behind the bregma (Broca, Féré, etc.). Its lower extremity falls about 0.5 centimetre behind the auriculo-bregmatic line, and a little above a line Féré draws through the head parallel to the basal plane, passing through the apex of the lambdoidal suture and the superciliary ridge of the frontal bone. (See figure.) This would bring the lower end of the fissure of Rolando about 6 centimetres above and a little behind the external auditory canal.

Having thus located the fissure of Rolando, enables us to map out the neighboring convolutions, which are to-day held to be of the greatest importance, as they are supposed to contain the psycho-motor centres of the opposite half of the head, body, and extremities.

The ascending parietal convolution will, of course, underlie the surface of the head just behind this region, while the ascending frontal is just in front.

The first or superior frontal convolution will be found commencing about 2·5 centimetres behind the bregma, and passing forward near the median line toward the orbit. The second frontal convolution will occupy a similar but more lateral position, while the third frontal convolution lies wholly in front of the auriculo-bregmatic line, and on a plane 5 centimetres above the external auditory meatus. Its folded or central part is about 2.5 centimetres in front of the auriculo-bregmatic line, or about 2 centimetres behind the external angular process of the frontal bone.

The tip of the sphenoidal lobe is 1 centimetre behind the external angular process of the frontal bone, hence at this point the fissure of Sylvius commences.

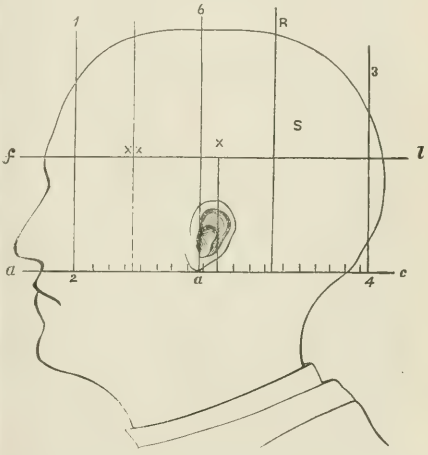
The middle or horizontal part of the fissure coincides pretty nearly with the squamo-parietal suture, and hence falls near the fronto-lambdoidal line. The termination of the fissure is in the lower posterior parietal region, and this would bring the supra-marginal convolution under the parietal eminence (Turner) and the angular gyrus below and a little behind the same.

The occipital fissure varies very little from the commencement of the lambdoidal suture, a point pretty easily made out in most heads. The relations of the fissure of Rolando to the antero-posterior diameter of the brain as determined by Féré are interesting. Its superior extremity is in the average 11.1 centimetres from the frontal extremity (range from 9.5–12.5 centimetres) and 4-9 centimetres from the occipital extremity.

The lower extremity of the fissure is 7.1 (6.4–8.2) centimetres from the frontal extremities, and 8.9 centimetres (7.2–10) from the occipital extremity of the brain.

With such data as are contained in the above paragraphs at our disposal, we can see the convolutions, so to speak, through the scalp, skull, and meninges.

FIG. 1.



Outline of head, reduced one-third, on which a modified system of Féré's lines is drawn. *AC*, alveolo-condyloid; *AB*, auriculo-bregmatic line; *FL*, fronto-lambdoidal line; 1, 2, frontal limit; 3, 4, occipital limit of the brain; *R*, posterior extremity of the fissure of Rolando; *X*, anterior extremity, same; *XX*, location of the middle fold of the third frontal convolution, a little below and in front of which lies the tip of the sphenoidal lobe; *S*, the posterior extremity of the fissure of Sylvius, and the intersection of the lines 3, 4, and *FL*, locates the occipital fissure.

Of cerebral localization as bearing on this subject, much might be, but very little need be, said. Neurologists are sure that there are certain regions of the brain which when irritated, compressed, or destroyed, give rise to perfectly unmistakable symptoms.

To recapitulate:

We have trephining, an operation proving fatal in only three per cent. of published cases:

Opening the dura mater, fatal in only 7.6 per cent. of published cases:

We have the brain, an organ tolerant of injury and ready to take on a reparative process:

We are possessed of a knowledge which enables us to tell when certain parts of the brain are diseased; and we also have anatomical data which tell us just where to pierce the envelopes of the brain to reach a certain definite part of its convexity. We have all the elements of safety and anatomical accuracy, why should cerebral surgery not advance with pulmonary, renal, intestinal, and ovarian surgery?

My allotted time and space are exhausted, and I close with a few practical remarks suggested by the subject in hand.

The substitution of the dental engine and a burr or drill cutting on the side for the ordinary trephine strikes me as advantageous. It has been used and advocated by Dorr[1] and Roberts.[2] Its advantage over the trephine is principally that with it you can cut away as much or little bone as you please, and make an opening of any shape you please. It is especially useful in trimming down the edge of overriding bone to allow the elevation of depressed fragments.

Let the operation always be done with antiseptic precautions. Try and secure only approximate coaptation of the flaps. Provide the freest possible drainage. Use cold antiseptic dressings, without much compression. Enjoin the strictest quiet in a posture facilitating drainage. Simple diet, and a slightly loose condition of the bowels. On the slightest rise of arterial tension or temperature, give jaborandi or aconite to the production of physiological effects. Quinine and alcohol should, I think, be given only in tonic doses. An anodyne is often indicated, and it is my advice never to use opium, or any of its preparations or derivatives. To ease pain, quiet delirium, or induce sleep, use the hydrate of chloral in small repeated doses (.60–1, every ten or fifteen minutes). Quinine and alcohol in large, and opium in *any* dose, aggravate intracranial inflammation when present, and, I think, may excite it.

These suggestions apply equally well, or with still greater force, to cases in which the dura mater or brain is accidentally or intentionally invaded.

A few words as to what I consider good indications for opening the skull.

An injury of the vault, however slight the marks of external violence, provided there be coma, aphasia, hemiplegia, or hemispasm of the lower part of the face, of the arm, or leg, or all three, constituting hemiepilepsy; whether accompanied or not by chills, fever, headache, and vomiting. General epileptic convulsions do not constitute so good indications for operation. Every case of compound fracture of the skull whether there be cerebral symptoms or not. Cases in which, after the lapse of months or years even, unmistakable cerebral symptoms follow an injury to the head. Atrocious and incurable headaches, particularly if localized, aphasia, monoplegias and monospasms, hemiplegic or hemiepileptic seizures or general epileptic attacks, if they have an aura pointing to a localized lesion. In addition to the bone, the dura mater should be opened; in all cases in which exploration with a hypodermic needle discloses the products of purulent inflammation or a great deal of fluid blood under it. In all cases in which a serious lesion of the brain is suspected, but cannot be otherwise proven.

In addition to the bone and dura mater the brain should be explored, delicately with a probe, in all penetrating wounds of its substance, punctured, lacerated, or gunshot. Its mass should be invaded, even when superficially intact, by a fine, blunt exploring needle, when the presence of foreign bodies or hidden collections of pus are suspected, and, for the extraction or evacuation of such, larger openings should be made with a dull instrument.

Finally, accessible neoplasms of the brain, which have resisted medicinal treatment, and which continue to grow and threaten life, should be removed for the reason that they are generally single, seldom have secondary deposits, are surrounded by an inflammatory zone of demarcation, and *always* kill by pressure.

[1] Buff. Medical and Surgical Journal, 1879–80, vol. xix. p. 475.
[2] Philadelphia Medical Times, 1881–82, vol. xii. p. 206.

SUCCESSFUL RESECTION IN PSEUDARTHROSIS OF HUMERUS.

BY A. C. GIRARD, M.D.,
CAPTAIN AND ASSISTANT SURGEON, U. S. A.

THE result of unusual operations ought to be reported to the profession, whether successful or not. These reports are the data on which our statisticians base their papers, and the fear of accusation of self-laudation should not deter physicians from publishing successful cases, if they improve statistics, and thereby are an encouragement for surgical interference to restore full usefulness to an otherwise maimed limb.

In this spirit, the following case is submitted to the profession, with a skeleton history, omitting anything that does not pertain to the surgical treatment, but recording what has given the writer much concern to bring the result to a favorable issue.

In June, 1883, the patient, F. R. T., sustained a simple fracture in the upper third of the humerus. He was admitted to the hospital, and treated, during my temporary absence in the East, with felt splint, apparently making a good recovery; but eight months afterwards, having during all that time eluded an examination, he appeared before me, because his term of enlistment was soon to expire, and he desired reënlistment, and feared he could not pass the examination which would then be made. I found a pronounced pseudarthrosis about the indention of the deltoid muscle; an attempt to raise the arm first lifting the upper fragment, and the remainder of the arm after the limit of mobility had been reached. Even in this condition there was considerable power, and no soreness. T. being a married soldier, and of somewhat intemperate habits, I came to the conclusion that, being too soon discharged from the hospital, anxious to help his wife, and perhaps subjected to occasional falls, he had prevented ossification by the imperceptible strains brought to bear on the seat of fracture.

Time being of paramount importance, the question

of exciting ossification by the usual means had to be disposed of in the negative, and T. nursed himself up to the ordeal of an operation which was appointed for January 14, 1884. A. A. Surgeon J. C. Martin, U. S. A., ably assisted.

Chloroform being administered, and Esmarch's bandage applied, a longitudinal incision, about five inches long, was made in the space between the insertion of the deltoid and median vein. A large callus was reached, and incised likewise, to find the exact location of the pseudarthrosis; a circular incision divided this at the juncture of the fragments, but this incision had to be carried through skin and part of the deltoid to obtain room enough. Considerable difficulty was experienced in dividing the remote parts of the arthrosis, owing to the close proximity of the brachial artery; but finally the bones were everted, and their face (after scraping back about one-quarter of an inch of periosteum) sawed off the same distance. The bones then came almost into exact coaptation, and holes were drilled into them for two strong silver-wire sutures, which were twisted and cut off long enough to facilitate removal. Esmarch's bandage being removed, copious venous hemorrhage ensued, which was stopped partly by elevation and partly by compression in the wound and over the axillary artery to lessen the blood supply.

During the latter part of the removal of bone, my assistant being busy keeping the soft parts retracted, and the chloroform entrusted to a convalescent, I happened to look up, and found that the patient had ceased to breathe. Being prepared for such mishaps, I dropped his arm, seized his legs, and swung them over my shoulder, meanwhile ordering amyl to be applied to the nostrils, artificial respiration established, and vigorous slapping over the region of the heart to excite its action. The impediment soon passed off. I mention this in support of my advocacy, in other papers, of the safety of chloroform, if properly handled.

The parts were then brought together with interrupted sutures, dressed with a Lister dressing, and put on a wooden splint. Considerable oozing took place for two days, for which the surroundings of the wound were packed with marine lint.

On January 22, eight days after the operation, the wound being covered by boracic ointment, spread over lint, a plaster-of-Paris bandage was applied, covering the arm from the shoulder to midway between elbow and wrist, and encircling chest and opposite shoulder. The arm part of the splint was strengthened by perforated tin strips between the layers of bandage. A large fenestra was then cut to dress the wound.

In two days, owing to the lack of support of the splint, the lips of the wound receded, and gaped widely open; they were brought and held together with button sutures and silver wire, which were removed in a few days, and found to have accomplished their task successfully.

From that time, the case progressed without drawback. The suppuration was moderate. One of the silver wires holding the bones appearing loose, it was removed with the edge of the bone, about the size of a millet-seed. The other wire, being shorter, had slipped under the tissues, and was removed six weeks after the operation, as it happened to appear in sight. As the tissues receded, and the plaster splint caused painful pressure on the different bony eminences, the fenestræ were cut and padded.

On the fifty-sixth day after the operation, the plaster splint was removed, when the operation found to have been entirely successful, the arm being straight and solid. Neither shoulder nor elbow-joint seemed to have suffered from the enforced inactivity, and to-day, March 22, I found the arm freely movable, and the plan of fracture only discernible by the callus.

I made this history longer than the gravity of the case seems to warrant. The works on surgery, however, being very incomplete in advising how the different phases of such an operation should be met, especially on advanced notions, I believe my experience in this case may prove useful as a clinical guide to operators who, like me, encounter this operation for the first time in their practice.

In conclusion, I might state that the patient's temperature was practically normal after the first reaction. A solution of bichloride of mercury was used for all purposes of ablution, and gave me great satisfaction in this as well as in other surgical cases, since I have discarded the carbolates in consequence of the researches of Dr. Sternberg, U. S. A., on the relative value of antiseptics.

FORT KEOGH, M. T.

MEDICAL PROGRESS.

ON THE DIGESTION OF RAW AND OF BOILED MILK.—DR. N. A. RANDOLPH, at a recent meeting of the Academy of Natural Sciences, of Philadelphia, referred to certain profound changes produced in milk by boiling. In this operation the casein is not coagulated, but there is an evolution of sulphuretted hydrogen (Schreiner), a diminution in the gaseous constituents of the fluid and a change in the amount of ozone present.

The most striking difference between raw and boiled milk lay in the respective responses to rennet, acids and alkalies.

At the body-temperature the firm coagulation of raw milk occurred almost immediately upon the addition of a neutral rennet solution, whereas boiled milk, under the same conditions, did not clot for a far longer period, and the coagula were not firm. On the other hand, dilute or strong acids were tenfold as active upon boiled as upon raw milk. Some time after making these experiments Dr. Randolph found that, so far as acids and rennet were concerned, similar results had been obtained by Schreiner (*Chem. Centralbl.*, III. Folge, IX. Jahrg.), and he desired to present his observations in these particulars simply as confirmatory of that observer.

Upon the addition of dilute alkalies to boiled milk, the rise of cream was much more rapid and complete than in raw milk under the same conditions.

Artificial digestions showed that milk was more readily digested when raw than when boiled. This was further confirmed by a comparative examination and weighing (in over fifty cases, and in which he was aided by Dr. Roussel) of the contents of the stomach

after raw and boiled milk had been, in different individuals, undergoing actual gastric digestion. In these cases the residue found in the stomachs of those persons receiving boiled milk was greater than the similar residue found in the stomachs where raw milk had been undergoing digestion for the same length of time.

These results are confirmatory of those of Jessen, who made several observations on one healthy individual. In the studies of Drs. Randolph and Roussel, the sources of error arising from individual peculiarities were eliminated, inasmuch as the experiments were conducted upon eight healthy men.

Treatment of Leucorrhœa.—Dr. Fruhauf uses the following method in cases in which the ordinary treatment fails: He commences by disinfecting the vagina by injecting into it a solution containing 1 to 100 of carbolic acid and 4 to 100 of boracic acid. Then, with a speculum, he introduces three or four oakum tampons, each as large as a walnut and containing grs. iss to iij of iodoform, and each having a string attached for ready removal. These are left *in situ* for two or three days. If there is an ulcer of the cervix, he cauterizes it with a solution containing equal parts of acetic acid and distilled water. Of course, in some cases general treatment must be resorted to. For this, Fruhauf prefers the phosphate and lactate of iron.—*Journ. de Méd. de Paris*, March 8, 1884.

Litholapaxy.—Surgeon P. J. Freyer, of the Bengal Medical Service, reports a series of 57 cases of litholapaxy performed in 1883. During the year, 107 cases of stone came under his observation. Of these, 6 were cases of urethral calculus, all of which were successfully operated on by urethrotomy. There were 40 cases in male children or boys under the age of fifteen; these were all operated on by lithotomy, with 1 death. In the remaining 61 cases, all of which occurred in adult males, with the exception of 3 instances, in female children, litholapaxy was attempted; but, for various reasons, in 4 of the cases the operation could not be performed. Of the 57 cases, 2 were fatal; 1 from peritonitis, evidently by extension of inflammation from the neck of the bladder; the other died of pyæmia, the result of cystitis. Freyer suggests a new method of diagnosis by means of the aspirator. In one case a most careful search was made by means of sounds of various kinds, but no calculus could be detected till the aspirator was employed, when a distinct click was at once felt during exhaustion of the water from the bladder, and due to the calculus being carried with force against the eye of the canula by the outward stream. He has now performed 79 litholapaxies, with only 3 deaths.—*Indian Medical Gazette*, March, 1884.

Splenectomy.—Mr. Knowsley Thornton removed a spleen, at the Samaritan Hospital, on April 22, by the median abdominal section. All its lower part was hollowed out into a multilocular cystic cavity, and it weighed two pounds. The patient, a single girl aged nineteen, had been known to have a tumor for two years, but latterly it had grown fast, and given much pain. During the tying of the pedicle, the shock was very severe, but she revived directly the tumor was cut away and the drag taken off the pedicle. She is progressing satisfactorily. The specimen will, we understand, be shown and further progress reported at the Pathological Society.—*Lancet*, April 26, 1884.

Benzoate of Soda in Infantile Diarrhœa.—Dr. R. Guaita (*Rivista Italiana di Terap. e Igiene*, Gennaio, 1884) thinks the summer diarrhœa of infants is for the most part a zymotic disease, and due principally to a special ferment (microbe), which either comes from without, or is developed during the process of digestion from certain kinds of food. It occurred to him, therefore, that benzoate of soda, recommended by Kapuscinsky and Zilewicz, would prove valuable in these cases, being antifermentative; it may be administered alone, or in combination with bismuth.

This treatment was tried in 53 cases, the children being from six months to two years old. In 35 cases the affection had lasted from 24 to 30 hours, in the remaining 18 from 6 to 14 days; in the 35 cases, the cure was complete in from 4 to 8 days; in the 18, the average time was 21 days. The treatment is preceded by an efficacious purge—calomel or jalap; this having acted, the soda treatment is commenced.—*Gazz. degli Ospitali*, March 30, 1884.

Pistol-ball in the Brain.—In October, 1882, Dr. Sonlonwiae saw a boy, five years of age, who had received a pistol-ball in the head. Its point of entrance corresponded to the third convolution of the left anterior frontal lobe. The boy was unconscious for forty-eight hours. At the same time a hernia cerebri appeared. For five days there was complete aphasia, but this gradually disappeared. Paralysis of the left arm then appeared, which lasted for fifteen months. There has been no encephalitis at any time, and the boy is now, to all appearances, well.—*Gazz. degli Ospitali*, March 30, 1884.

Ligature of the Subclavian and Common Carotid for Innominate Aneurism.—Dr. Julius Rosenstern reports a successful case of this operation, performed on a woman æt. 42 years. The aneurism dated for two years. The patient was out of bed in about five weeks. At present there is hardly a trace of the tumor, though the pulsation has not yet entirely disappeared.—*Pacific Med. and Surg. Journ.*, March, 1884.

Vaginal Extirpation of the Uterus.—Professor Peruzzi performed this operation on April 8, in the hospital at Lugo. The patient was thirty-four years old, and had cancer of the sub-vaginal cervix uteri with supra-vaginal infiltration, but without infiltration of the uterine body. Billroth's operation was performed with antiseptic precautions. On April 18, the patient was without fever and was rapidly improving.—*Gazz. degli Ospitali*, May 7, 1884.

Nephrorrhaphy. — Prof. Andrea Ceccherelli performed this operation in February, at the Surgical Clinic in Parma, for painful movable kidney. Kahn's method was employed. There were no untoward symptoms, and after thirty-six hours there was no fever.—*Gazz. Medica di Torino*, March 25, 1884.

THE MEDICAL NEWS.

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OF MEDICAL SCIENCE.

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SATURDAY, JUNE 21, 1884.

SUPRAPUBIC LITHOTOMY.

THE operation of suprapubic lithotomy seems to be undergoing a revival of interest at present. So short a time as ten years ago, it was rarely spoken of and hardly ever performed. Now it has ardent advocates in this country and tolerant critics in Great Britain, while in France it is being most enthusiastically championed, and in Germany it has just been put as the alternative for rapid lithotrity. In a recent paper in the *Wiener med. Wochenschrift*, (1884, Nos. 3–11), PROF. V. DITTEL discusses "The Relation of Litholapaxy to Suprapubic Lithotomy," and indicates a manifest preference for the latter method of cutting for stone, in cases in which crushing is not applicable. His article is long and contains a report of a number of cases operated upon by each method. In regard to the merits of Bigelow's operation, Dittel is in accord with most modern surgeons. In regard to the cutting operation, he is in advance of the majority. He states the often repeated arguments, founded on anatomical considerations, in favor of suprapubic lithotomy, and gives a number of indications for its performance in preference to litholapaxy. The objections to it, he maintains, would disappear if it were more used. He thinks it would bring lithotomy to perfection, if it were possible to conduct the after-progress of the wound as safely as can nowadays be done in the case of other wounds of the periphery. He further seems to think that such an end is not unattainable, for he urges it as a duty that every surgeon, whose position and reputation bring him a large clientèle, shall cultivate this method, so that its success may overcome the objections often urged against it.

In occupying this position, Dittel agrees with those surgeons who think that Bigelow's method of lithotrity is likely to eliminate from stone operations all the calculi which have heretofore proved the most amenable to perineal lithotomy, and leave those in which this has proved very hazardous; in other words, the stones which are best suited for removal through the hypogastrium. Such being the case, it seems timely to make some remarks on the claims and present status of the suprapubic method.

It is claimed for this method that it is scientific, exact, free from a number of hazards attaching to perineal operations, easy of execution, and satisfactory in its results. These claims, however, are not universally admitted. On the contrary, the prevailing opinion and practice still treat this method as if it were more hazardous than others. Yet it is to be observed that those who have most carefully studied the subject, have an enthusiasm for suprapubic lithotomy which appears to be in a definite ratio to their familiarity with its actual history and achievements, while those who, in our day, oppose it, usually indicate by their arguments, a bias against it, and an imperfect acquaintance with what has been done for it by act and pen, especially during the past ten years. Before that time the operation may be said to have fallen almost into oblivion. It is true that in Germany Günther had, in 1851, published a valuable monograph, containing reports of 260 cases, in which he refuted many of the objections urged against it, and recommended it for general adoption. But the light his labors shed upon its merits, which had done much to save it from being thought as ill of among his countrymen as elsewhere, was fading even there, while it never penetrated to France, England, or America until it had almost gone out at home.

Twenty-five years after Günther's effort, Dr. Dulles published in the *American Journal of the Medical Sciences*, for July, 1875, as the first of a series of papers on this subject, an elaborate article in favor of the general adoption of suprapubic lithotomy, founded upon a number of cases so large (four hundred and seventy-eight) that we find Prof. Dittel, in the article before us, casting some doubt upon their credibility. Dr. Dulles argued that the dangers of the suprapubic operation had been much overrated, and that the fears of it were founded upon common belief, not on facts. He emphasized the disadvantages under which it had labored, and developed the remarkable conclusion that its results, in spite of these disadvantages, were almost as good as those of lateral lithotomy for all stones above an ounce in weight, and progressively better for all those weighing more than two ounces. The operation he declared to be simple, easy of execution, and safe, if applied to cases in which any method could be considered to be safe.

In the same year Prof. Dittel did his first operation of this sort, and expressed considerable enthusiasm over the result. A number of American operations also followed, with such success as to make the operators hearty endorsers of the method. In 1879 Dr. Flury published, in Tübingen, a monograph in which the statistical work of Günther was taken up and carried on, from 1850 to the former date. In the same year Prof. Van Goudoever, of Utrecht, advocated at the International Medical Congress at Amsterdam, the more general employment of this method, reporting fourteen successful cases. In 1880, Prof. Petersen, of Kiel, suggested, as an improvement in the *technique*, to raise the bladder out of the pelvis by distending a colpeurynter placed in the rectum, and reported some successful operations done in this way. The next year Langenbuch, of Berlin, proposed a curious method of doing the operation *en deux temps*, and Anger presented at the International Medical Congress at London, a set of thermo-cautery instruments, which he thought would eliminate some of its dangers. The same year Dr. Lange, of New York, did two suprapubic operations in which he secured union of the wounds by the first intention. About this time M. Charles Monod, of Paris, took the subject up, and, in a report to the Surgical Society of Paris, declared that this method is relatively easy of execution, that the dreaded wounding of the peritoneum can be almost infallibly avoided, and that the operation is too much neglected by our contemporaries. Within the last ten years a number of surgeons in Germany, Austria, and France, have been practising and advocating it, among them Ultzmann, Albert, Dittel, Petersen, Guyon, Perrier, and Bois, while its most recent literature includes a valuable thesis by M. Ch. Broussin, published in Paris, in 1882, and a monograph of more than 250 pages, published in 1883, by E. Bouley.

From this it may be seen, as stated above, that the operation of suprapubic lithotomy is having a decided revival at the present time. In Europe this revival has reached a large number of surgeons on the Continent, although it does not seem to make much headway in England, where a number of authors still rest their opinions of it on the imperfect table of Prof. Humphrey, containing 103 cases and published in the same year that Günther published his 260, being apparently ignorant of other work of the same sort, while at the recent meeting of the American Surgical Association, the discussion on a case reported by Dr. Tremaine disclosed an equal lack of information as to what has been going on in regard to it, in this country and in Europe, during the past ten years. The only one of the Fellows who seemed to be aware of the increase of interest in this subject made a prediction which was the more astonishing from the fact that his hearers were utterly unprepared for it, namely, that in ten years this would be the operation in common use. This prediction may be regarded as somewhat sanguine, but it seems at least to be more in keeping with the reasonable prospects of suprapubic lithotomy than the adverse opinions which have come down from previous generations. It would, indeed, appear as if Prof. Dittel had good reason for intimating, in the article we have referred to, that the future of stone operations belongs to litholapaxy and suprapubic lithotomy.

COLLECTIVE INVESTIGATION OF DISEASE VERSUS THE INFECTIOUS NATURE OF PNEUMONIA.

IN our issue for May 24 we discussed some views on the origin and nature of pneumonia, elicited at the session of the recent Congress of German Physicians, which tended to show the infectious nature of the disease. Moreover, we find that they involve statements which are at variance with others contained in the preliminary report on acute pneumonia of the British Collective Investigation Committee, and therefore, call for further consideration.

Jürgensen, in the paper referred to, says that three-fifths of all cases of pneumonia occur between the 1st and 14th years; and of the remaining two-fifths, the number of cases after 45 is double that between 14 and 44; in other words, two-fifteenths of all cases occur between 14 and 44, and four-fifteenths after 44—the object being to show that the older notion that acute pneumonia occurs during the period in life of greatest vigor, is erroneous.

From the report of the British Committee, we learn that 269 cases occurred between 10 and 60 years of age, of which 195, or about two-thirds, were between 10 and 40, the distribution in decades being, 70 between 10 and 20; 70 between 20 and 30; and 45 between 30 and 40; this leaves 74, or one-third, between 40 and 60. Now, although the periods of time comprehended are not identical, they are sufficiently so to permit the comparison with Jürgensen's statistics, which exhibits a marked discrepancy, the observations of the British Committee showing that acute pneumonia is more prevalent between 10 and 40. As Jürgensen does not furnish the data on which his results are founded, and those of the British Committee are based upon a system entirely independent of any conclusions to be proved therefrom, we are inclined to attach the greater weight to the latter.

Again, Jürgensen states that only 4 per cent. of all cases originate in cold, the remainder being doubtful or independent; also that in Tübingen, when the rainfall exceeded the mean, the cases were fewer than under opposite circumstances; and Edlefsen makes the same statement with regard to Kiel. The British Committee inform us that more than one-half the total number of cases arose when the weather was damp or wet, and even a larger number when it was

cold, the combination of cold and wet being particularly favorable to the development of the disease.

In the matter of the sanitary surroundings of the cases there is less discrepancy, these being reported by the British Committee "indifferent" or "bad" in 170 out of 342 cases, and doubtful in 8; and of 341 districts in which pneumonia was prevalent, 168 were "indifferent" or "bad," and 173 good.

Again, according to the British Committee's report, premonitory symptoms were present in about 270 cases, absent in 80; *rigor occurred at the onset in 241* cases, and was absent in but 39; catarrhal symptoms preceded the attack in 40, and cough in 29. The frequent occurrence of rigor is significant, compared with the statement of Jürgensen, with which it is not in accord.

In the matter of communicability, on the other hand—in regard to which Jürgensen furnishes no direct data—the British Committee refer to a striking instance in which a husband is supposed to have taken the infection from his wife, another of a wife from a husband, one of a child from its companion, and another in which four members of a family were attacked in succession. In all these instances the sanitary surroundings were good. Three epidemics of pneumonia were also reported. No facts are furnished in the British report on the subject of Friedlander's pneumonia-coccus, the observations having been made prior to its discovery.

As to treatment, the British reports show the greatest diversity, but tend to prove that the disease runs a definite course, let the treatment be what it may. More unanimous, however, is the verdict in favor of alcohol and cardiac stimulants, than toward any other line of treatment, the tendency to death being mainly from cardiac failure; and in this respect the observations of the German and English physicians are in entire accord. Quinine, digitalis, and aconite were much used, but the extreme antipyretic measure of the German school —the application of the cold bath, was not employed in a single case by the English. Counter-irritants, poultices, blisters, and leeching were frequently used, but only *one case of venesection is reported;* "a solitary instance," says the author of the British report, "of the one measure which, a generation ago, would have been adopted in every case without hesitation." Of the 350 cases, 282 recovered, and 68, or 19.4 per cent., died; of males, 18.7 per cent.; and of females, 20.8 per cent. Would this mortality not have been less had venesection been more frequently performed?

As might be expected from the above statements, the conclusion of the British Committee was that the evidence before them was insufficient to support the doctrine that pneumonia is a specific fever, whose chief local manifestation is in the lung.

From the above, too, some idea may be obtained of the value of the collective investigation of disease, although the report on pneumonia is much less striking in this respect than some others, and we are glad to see that the Medical Society of the State of Pennsylvania has taken steps which are calculated to test its value in this country.

EPILEPSY AND PREGNANCY.

THE relative effects of epilepsy and pregnancy have been occasional subjects of professional discussion; and while there has been general agreement that the pregnancy is not, as a rule, injuriously affected by the epilepsy, there has been not a little difference of opinion as to the effect of the former upon the latter.

Having recently had charge of an epileptic who became pregnant, and was delivered at full term of an apparently healthy, well-developed child, we watched the case with great interest. Her epileptic attacks were not modified as to frequency, or as to severity, either during pregnancy, or after labor.

In a recent monograph by DR. BÉRAUD, upon epilepsy in its relations with pregnancy and labor, the subject is quite well studied, the author having analyzed forty-six cases. One of his conclusions is that while in some cases of epilepsy, pregnancy is without any effect upon the disease, in others it has an injurious effect; in a number slightly greater than these two classes, its influence is beneficial. But in cases favorably affected, the modification is only temporary, and, as a rule, it ceases with gestation.

THE S. D. GROSS PROFESSORSHIP OF PATHOLOGICAL ANATOMY.

WE call attention to the appeal, in another column, for establishing this memorial chair. Such a movement cannot fail to receive the cordial endorsement, and the earnest help of the profession of the entire country. Not only this, but physicians should endeavor to influence the liberal-minded and the generous-hearted among the laity in its favor. The fame of Dr. Gross gave honor to the American name in all enlightened countries, and his memory should be perpetuated in the mode proposed by a common contribution from the American people. It should not, therefore, be left to his own profession alone to erect this suitable monument to his memory, but the coöperation of the public should be obtained. By acting thus in concert, and by acting promptly, the work may be accomplished within a brief period.

THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

ELSEWHERE we publish a brief account of the arrangements which have been made for the Copenhagen Congress, to be held in August next. The programme is very full, and the subjects announced

for consideration, over two hundred in number, are diversified in scope and extremely attractive in character. We regret to note that no American is among the names announced for addresses in the General Sessions; for this, however, the Organizing Committee is not responsible, since neither of the gentlemen from this country whom they invited felt able to accept the honor.

The Congress will receive a formal invitation from a committee of the American Medical Association to hold its next session in Washington, in 1887, and we know that we represent the sentiment of the profession in saying that, if it is accepted, our foreign colleagues may feel assured of a most cordial reception on this side of the Atlantic, and that every effort will be made to secure a pleasant and profitable meeting in the Capital of the United States.

SOCIETY PROCEEDINGS.

MASSACHUSETTS MEDICAL SOCIETY.

One Hundred and Third Anniversary, held at Boston, June 10 and 11, 1884.

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, JUNE 10TH—FIRST DAY.

IN the morning the Fellows of the Society were invited to visit the Massachusetts General, City, Children's and Lying-in Hospitals, where members of the medical and surgical staffs were in attendance.

Several interesting operations were performed, among them a case of litholapaxy, by Dr. H. J. Bigelow, and an operation for the radical cure of hernia, by Dr. J. C. Warren, at the Massachusetts General, and ligature of the femoral for a large aneurism of the calf of the leg, by Dr. Charles D. Homans, at the City Hospital.

At noon the Society met at the new building of the Harvard Medical School, to listen to a communication by DR. H. P. BOWDITCH, on

METHODS OF INSTRUCTION AND RESEARCH IN PHYSIOLOGY, WITH DEMONSTRATIONS.

Dr. Bowditch, in welcoming the Society, said: "Mr. President and Gentlemen: The Massachusetts Medical Society has been invited to assemble to-day in the lecture-rooms of the Harvard Medical School, in order that the members may have an opportunity to examine for themselves the methods here employed in giving instruction in anatomy and physiology, and to inspect the appliances used for original investigations in these departments."

The arrangements of the physiological laboratories and lecture-rooms were then explained, and a large number of original experiments and sets of apparatus in working order were exhibited and explained. Dr. Bowditch was assisted by Drs. J. S. Warren, Garland, Putnam, and Ellis.

The effect of irritation of the vagus nerve on the blood-pressure of the dog, vaso-motor nerves of the cat and frog, studied by means of the plethynmograph; effect of temperature on the rate of heart-beat of frog; the force of ciliary motion, as illustrated by the power of a piece of ciliated mucous membrane of the frog to carry a load up an inclined plane; subjective complementary motion produced by a revolving spiral figure, and the reaction time studied by means of the pendulum myograph were shown. The animals used in these experiments were under the influence of large doses of ether or morphia.

DR. ERNST exhibited his

APPARATUS FOR THE CULTIVATION OF THE TUBERCLE BACILLUS,

together with specimens obtained by cultivation and inoculation, the fourth generation from the primary culture being shown.

DR. THOMAS DWIGHT then received the Society in the anatomical lecture-room, and spoke on

MODERN METHODS IN ANATOMY.

He referred to the duty that the holder of a professorship in a university owes to the profession or the community, and of their right to expect from him an account of his views and plans of instruction. He spoke of the great anatomical museums of the old world and the names of the great anatomists that are associated with them. Connected with the Medical School is the Warren Museum, founded by the late Dr. John C. Warren, professor of anatomy and surgery. This museum was greatly enlarged and improved by the many years of patient labor of the late Dr. J. B. S. Jackson, but though it contains a considerable collection of normal anatomy, it is essentially a pathological museum.

The science of anatomy still has a future, though one sometimes hears the contrary opinion expressed. It is true that the component parts of man are still the same as formerly, and that they have been fairly well described, but the methods of study are constantly undergoing changes for the better, the relations of embryology and comparative anatomy to normal anatomy are better understood, and the advance of topographical anatomy marks an era in the science. The method of study and demonstration by means of frozen sections is a great aid to other methods, though it can of course never take their place.

It is only within a few years that the position of the stomach has been correctly described, that is to say, with its lesser curvature nearly vertical instead of horizontal; the idea of the liver has also been changed by the researches of His, who describes it as it exists in the body with a posterior surface, and to-day the position of the ovaries is still a subject of dispute. The relations of the pharynx, mouth, and œsophagus are shown by Braune to be materially different from those pictured in the older, and even in some of the best recent anatomies.

Dr. Dwight then showed a series of thin sections of bones, illustrating their structure, and various frozen sections of different parts of the body. A series of corrosion preparations, including colored ones of wax and resin made by himself according to Rüdinger's directions, and others in fusible metal prepared by Dr. Mixter, assistant in anatomy, were shown. These give a clear idea of the extent and distribution of the vascular system of different organs as well as the shape and capacity of cavities, such as the air-cavities of the head,

the ear, etc. The wax and resin preparations possess the advantage that the different systems, where two or more are shown in the same specimen, can be made of different colors, while the fusible metal is much less brittle, is not in danger from changes in temperature, and the injection can be made even finer than with wax. (The alloy used is that known as Wood's fusible metal: Seven parts of bismuth, four parts of lead, two parts of tin, one part of cadmium. The tissues are destroyed by a saturated solution of caustic potash).

At three o'clock the Society met in Huntington Hall to listen to a paper by DR. GEORGE W. GAY, of Boston, on

THE PLASTER POSTERIOR SPLINT IN THE TREATMENT OF FRACTURES OF THE LEG, WITH ITS PRACTICAL APPLICATION.

He exhibited several patients wearing the splint, and applied one before the Society. The method is as follows: The leg is first enveloped in cotton batting, and a piece of crinoline is cut so as to envelop the limb from the toes to above the knee. The edges of this piece should be about an inch apart, along the front of the leg. With this as a pattern, six or seven similar pieces are cut, rubbed with plaster mixed with warm water and placed around the limb. A roller bandage is applied while the plaster is setting, and is then removed. This splint is especially adapted to simple fractures of the leg without extensive injury to the soft parts, and where there is not great tendency to displacement. As a fenestrated dressing it may also be used in certain cases of compound fracture. It is of especial value in children. Its advantages are that it holds the fragments firmly in position, cannot strangulate the limb, allows of easy inspection, and is very comfortable. This splint has given great satisfaction at the Boston City Hospital, where it has been in constant use for some years.

The reader spoke of the difficulties in the treatment of Pott's fracture, which gives more trouble than almost any other form of fracture of the leg. The patient should be confined for a long time, not less than three months in case of a patient of one hundred and fifty pounds, and longer for heavier persons.

This dressing is of great service in cases of ununited fractures of the leg, the patient being allowed to go about on crutches. Enough irritation at the seat of fracture seems to be produced to cause union in the majority of cases.

AN ADJOURNED MEETING

of the Society was held at four o'clock. At a previous meeting it had been held that the Society had no power to institute by-laws, the councillors alone having that power. After an animated and somewhat heated debate this ruling was not sustained by the Society, and on motion of DR. H. I. BOWDITCH the meeting voted so to amend the by-laws as to

ADMIT WOMEN TO THE SOCIETY

on the same terms as men. The motion was carried by a vote of about two to one. A concurrent vote of the councillors being necessary to render the measure operative, a committee was appointed to bring the matter before that body in the evening.

A STATED MEETING OF THE COUNCILLORS

was held at 7.30 o'clock. The action of the Society as regards the amendment of the by-laws was concurred in by a vote of sixty-three to forty-seven. This finally decided the question that has so long agitated the Society.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Charles D. Homans, M.D., of Boston.
Vice-President.—A. C. Deane, M.D., of Greenfield.
Treasurer.—Frank W. Draper, M.D., of Boston.
Corresponding Secretary.—Charles W. Swan, M.D., of Boston.
Recording Secretary.—Francis W. Goss, M.D., of Roxbury.
Librarian.—E. H. Brigham, M.D., of Boston.
Orator.—Frank K. Paddock, M.D., of Pittsfield.
Annual Chairman.—Robert Amory, M.D., of Boston.

WEDNESDAY, JUNE 11TH—SECOND DAY.

The 103d annual meeting was called to order at 9 o'clock, THE PRESIDENT, DR. ALFRED HOSMER, of Watertown, in the chair.

After the routine business had been transacted, the following medical papers and communications were presented.

F. NICKERSON, M.D., of Lowell, read a paper entitled

A CASE OF CHYLOUS DEPOSIT IN THE ABDOMEN.

The patient, a previously healthy, hard-working man of forty-five, was attacked with sudden pain followed by swelling of the abdomen. When seen the next day, a well-defined tumor was discovered in the lower part of the abdomen, and two quarts of a milky fluid were drawn off by aspiration. This fluid was found to contain a large quantity of albumen, fat soluble in ether, a little cholesterine, molecular granules, and lymph corpuscles—no urea was found. At varying intervals, during more than two years, similar attacks occurred, sometimes accompanied by vomiting of a milky fluid, and once, according to the statement of the patient, a quantity of the same was passed by the rectum. The tumor was aspirated several times, always with the same result, though the quantity of fluid became less. It is now eighteen months since the last attack, and the patient seems to have fully recovered.

In searching for the probable cause of the tumor, the reader considered all the forms of chyle- or lymph-containing growths, and concluded that it must be due to a rupture of some large lymph duct. Noteworthy features of the case are its sudden appearance, its long duration, the continued loss of lymph, and the final recovery of the patient.

L. HUNTRESS, M.D., of Lowell, read a paper entitled

THE PITCH OF THE PERCUSSION SOUND.

The reader spoke of the importance of this sign in physical diagnosis and the varying statements that are made concerning it in works by the well-known writers on the subject. A careful examination had been made of over two hundred healthy persons by the reader, to determine the normal condition in this respect. It is found that different parts of the same healthy chest may give a percussion note of varying pitch, and that the two

sides, in a large proportion of cases, present a marked difference. Hence, difference in pitch does not necessarily mean disease. Much confusion also exists as to the pitch of the tympanitic percussion note. This is probably due to the fact that the pitch depends on the volume of air in the cavity, the tension of the walls, and whether or not there is a communication between the cavity and the open air, as through an eroded bronchus.

J. F. A. Adams, M.D., of Pittsfield, read a paper entitled

SANITARY FOREST CULTURE.

The reader spoke of the three-fold influence of forests: 1. On the flow of streams. 2. The moderation of the climate. 3. The prevention of malaria. Streams are found to be much more regular in their flow when they arise in forests, these acting as reservoirs for the storage of moisture and preventing the too rapid melting of snows, and hence, heavy spring freshets. Many rivers are now subject to variations from overwhelming floods to an almost dry bed, that formerly, before the forests of their water-sheds were cut away, were much more regular in their flow.

It is a well-recognized fact that in many places malaria now exists, where before the removal of the forests it was unknown; and also, that the planting of trees in malarial districts may have a most beneficial effect. States should pass laws protecting forests, taking control of them if necessary; should encourage a knowledge of forestry by the establishment of schools, and plant large tracts of what are now waste lands, with timber.

J. Seaverns, M.D., of Roxbury, read a paper entitled

WEIGHT AS AN INDICATION OF THE CHARACTER OF RISKS FOR LIFE INSURANCE.

The reader discussed the value of the present standard of weight as compared to height, as generally accepted by life insurance companies, and from a careful study of a large number of recorded deaths, concludes that the margin of twenty per cent. above or below this standard, which is the customary allowance, is not correct. The limit should be fifteen per cent. for those under normal standard, while it may be increased to twenty-five for those above.

THE ANNUAL DISCOURSE

was delivered by Dr. John Crowell, of Haverhill.

He spoke of the need of a better education of the public mind on sanitary and hygienic topics, and referred to the advance that had been made in the past few years in this direction. Much remains to be done, however, and in no place, probably, is there greater room for sanitary reform than in country and seashore resorts and in country farm houses, to all of which physicians too often send their patients, without inquiring whether the most simple sanitary rules are complied with. Another great source of ill-health, among the people of this country, is poor cooking. Here we should take a lesson from the French, who seem to be able to produce better results from much scantier means. An idea of the contagiousness of diphtheria and kindred diseases, and the methods of preventing their spread, should be taught. Public funerals in cases of death from diphtheria, are still allowed.

Massachusetts is behind her sister States in laws to regulate the practice of medicine, and quackery is unhindred. The disgrace of a chartered bogus diploma-mill cannot, however, be repeated, laws having been passed in consequence of the discoveries of two years ago.

The reader closed with an appeal for better nursing among the people, for better ideas of feeding children, and a more earnest endeavor so to train the coming generation of the poor, that the present amount of misery may be materially lessened.

THE ANNUAL DINNER

was held in the Clarendon Street Skating Rink, nearly eight hundred Fellows being present.

Among the distinguished guests were His Excellency Gov. Robinson, Dr. Mackie, of New Bedford, Surgeon-General Holt, the Rev. Frederick Courtney, Samuel Eliot, Dr. George C. Shattuck, Dr. Henry I. Bowditch, Mr. H. O. Houghton; the president-elect of the Society, Dr. Charles D. Homans; the retiring president, Dr. Alfred Hosmer; Dr. S. A. Green, and Dr. H. P. Walcott, of the State Board of Health.

Dr. George B. Shattuck, the Anniversary Chairman, after dinner, called the meeting to order, and in a few well-chosen words congratulated the Society on its past and spoke of the second century of its existence on which it had now fairly begun, and which promises to be even richer in good work than the first. He introduced the newly elected president, Dr. Homans, as one who, from his associations and descent, should be able to prognosticate the future of the Society.

Dr. Homans spoke of the growth of the Society from 1789, when there were 68 members, against 1520 in 1884. More new members had been added during the past year than constituted the whole Society at the first-named period. At this rate of increase the Society would be a somewhat large body at the end of its present century.

Governor Robinson, on being introduced, was received with great enthusiasm. He welcomed the Society in the name of the people of the Commonwealth. With his education and skill, the physician is much to the community and to the State. No man educated to the practice of medicine has done his whole duty when he has taken care of the sick, reaped his profits, and settled down to the results. Ideas gained ought to stimulate to greater good, and to the discussion of great questions relative to the people at large. His relation to the science of "State medicine," the care of the poor, the insane, and the great questions of water supply and drainage, is an intimate one, and to him must the State look largely for guidance. The Governor then congratulated the Society on the step taken the day before in the admission of women, spoke of his desire to have only sound men appointed to the positions of medical examiners soon to be vacant, and closed with good wishes for the future of the Society.

Dr. Hosmer spoke of the recent establishment of the long-needed code of ethics, of the duty that each member of the Society owed to the Society and to the community, and of the self-respect that each must have to be a physician deserving of the name.

Remarks were made by Rev. Mr. Courtney, Dr. Crowell, Mr. Justice Field, and others. Adjourned.

MAINE MEDICAL ASSOCIATION.

Thirty-second Annual Meeting, held at Portland, June 10, 11, and 12, 1884.

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, JUNE 10—FIRST DAY.

THE meeting was called to order at 10.30 A.M. by THE PRESIDENT, DR. O. A. HORR, of Lewiston.

After prayer, the Association proceeded to the transaction of routine business.

THE TREASURER'S REPORT

presented a gratifying view of the financial condition of the Association. It was referred to an auditing committee.

DR. S. LAUGHTON, of Bangor, presented a report from

THE VISITORS TO THE MEDICAL SCHOOL OF MAINE,

which embodied a detailed review of the work in each department, and the school was, as usual, highly commended; it recommended the creation of two additional chairs, one of Histology, the other of Ophthalmology; also an increase of the course from a term of sixteen weeks to one of eighteen.

Favorable comment was made upon the new departure of having formal graduating exercises.

DR. S. P. WARREN, of Portland, presented an interesting paper, based upon an experience with

TWO UNUSUAL COMPLICATIONS OF LABOR.

Case I. Labor at term, complicated with acute pulmonary œdema, causing death.—Patient 35, multipara, gestation feeble, indefinite preceding history of "rheumatic fever" years ago. Bronchitis, probably subacute, began two or three weeks before expected confinement; slight œdema of extremities; spurious labor for two days prior to Friday evening, when dilatation began; pains were feeble through night, and dilatation little, requiring digital assistance. Morphia and chloral had no particular effect in checking cough or assisting labor. Cough increased as labor advanced, and was the immediate cause of inefficient contractions. Interference demanded to check growing suffocation and empty uterus. Before forceps could be applied, ergot quickened contractions and feeble female child born unaided. Little hemorrhage. Cough immediately increased; continued until patient was moribund from exhaustion and suffocation from long exudation. Large quantity of pinkish froth expectorated. Rallied under hypodermatic injections of whiskey and the use of digitalis and ammonia, warmth, etc. Death twelve hours post partum from probable heart clot.

Case II. Labor at seven months, complicated with fibroid uterus; eclampsia; septicæmia from sloughing fibroid; death on ninth day.—Patient 40, and first pregnancy; married seventeen years. Fibroma and probable pregnancy diagnosed four months before delivery. Eclampsia preceded by amaurosis and œdema; twelve convulsions; hypodermatic injection of morphia, a quarter of a grain, at lengthened intervals; digital dilatation and forceps extraction of stillborn male, weighing five pounds. Fibroma closed uterine canal and placenta being above it was extracted by hand above fibroma; no post-partum hemorrhage; no convulsions after dilatation of cervix was begun; urine boiled solid in test-tube; no casts; delirium previous post partum; conscious forty-eight hours after delivery; bichloride of mercury (1–2000) injections, quinia and stimulants every four hours; septicæmia on seventh day; death in uræmic coma on ninth day. Autopsy: Right Fallopian tube enlarged and inflamed; ovaries normal; acute peritonitis over right fundus uteri and in right iliac fossa; four ounces of pus in right periuterine sinuses; subperitoneal fibroid two inches in diameter on right cornu; three mural fibroids from two to four inches in diameter; cavity four inches long, filled with submucous fibroid, its mucous surface sloughing; uterine cavity empty; kidneys enlarged, pale, and showed lesions of chronic interstitial nephritis.

DR. T. A. FOSTER said that he believed that difficult labors might oftener find their cause in fibroids than was supposed, and advocated early relief.

In answer to the inquiry of Dr. Warren as to how many cases of œdema of the lungs had been observed by members, four were reported, and he believed the cause to be a dilated right heart.

APPLICANTS FOR MEMBERSHIP,

thirteen in number, appeared before the Board of Censors, and, on their recommendation, were elected to membership.

The Committee on Banquet reported that it was advisable to take no action this year, and asked to be discharged. After hearing a report from the Auditing Committee, the Session adjourned to 3 P.M., when, notwithstanding a rainy day, it was found that the attendance was greater than for many years.

AFTERNOON SESSION.

A Nominating Committee was appointed. Drs. F. A. Howe, of Newburyport and J. T. G. Nichols, of Cambridge, were introduced as *Delegates from the Massachusetts Medical Society;* they presented greeting from that Society, then in session in Boston.

DR. O. A. HORR, of Lewiston, the retiring President, then read his

PRESIDENTIAL ADDRESS.

After congratulating the Association upon its continued prosperity, he presented a retrospect of the work during its existence, and of measures accomplished by legislation for its own and the public good. Historical data valuable to the members of to-day, were recited, and the origin of many reforms which have been only recently accomplished, were noted; for example, the passage, by the Legislature, of the present anatomical bill. Members were urged to keep up the organization of the County Society, and suggestions were made for a nearer relation between them and the State Association. The removal of the Medical School of Maine, to Portland, was urgently pressed upon the Association, and the appointment of a committee to confer with the Trustees and the Alumni Association recommended.

Words of regret were expressed at Maine's backward position in matters of public health, but this is through no fault of the profession. A committee was subsequently appointed to consider the recommendations of the address, and, upon their suggestion, a Conference Committee was appointed to secure the removal of the Medical School to Portland.

DR. F. H. GERRISH read two papers:

A NEW METHOD OF RECORDING CASES.

The method provides for immediate notes in the presence of the patient, upon slips of paper, which are conveniently and easily filed, with such prescriptions as may be ordered, in envelopes, and then alphabetically laid away in pigeon-holes over the office-table, where they are always accessible. The system is claimed to be "complete, yet simple, easy to follow, inexpensive, convenient, labor-saving, protective against accidents in prescribing, capable of indefinite extension, and facilitates reference."

SOME NOTES ON ETHERIZATION.

DR. GERRISH stated that the notes presented had been prepared after the session of 1882, when Dr. Gordon, of Portland, stated that, by using two or three thicknesses of an old coarse towel well capped up over the face, with ether poured in small quantities upon the outside, he could in ninety per cent. of cases thoroughly etherize patients in three minutes. This at the time caused some incredulity among members, and he at once began a series of observations at the Maine General Hospital, in which were noted in 61 cases during the service of Dr. Gordon and others, with ether administered as proposed, the following data:

Longest time required, the shortest, the average time, and, incidentally, facts relative to the amount of ether used, and the behavior of the patient during and after.

The result in figures is—whole number,	61
Number etherized in 2½ minutes,	2
" " " 3 minutes or less,	5
" " " 4 " "	11
" " " 5 " "	13
" " " 6 " "	22
" " " 7 " "	27
" " " 8 " "	37
" " " 9 " "	45
" " " 10 " "	47
" " " 15 " "	55
Over 15 minutes,	6
" 20 "	2
" 30 "	1

Shortest time, 2½ minutes.
Longest time, 32 minutes.
Average time, 8.5 minutes.

Some statistics were submitted relative to the administration of ether after preparation by previous administration of bromides or some form of alcohol, and after no preparation.

In 23 cases after bromide preparation:

The average time was	13.6 min.
The shortest time was	8 "
The longest time was	30 "

In only 8 of these was there vomiting, during the administration of ether, or during or after the operation.

Per cent of cases vomiting at time of ether,	12.6
Per cent. vomiting,	34.7

In 16 cases after the alcoholic preparation:

Average time required,	8.1 min.
Shortest time required,	5 "
Longest time required,	20 "
Number vomiting at same time was	9 "
Percentage vomiting,	56.2 "

In 27 cases, after no preparatory treatment:

Average time required,	8.4 min.
Shortest time required,	4 "
Longest time required,	15 "
Number vomiting at same time,	17
Per cent. of cases vomiting,	62.9
Average time required for etherization in 127 cases,	9.3 minutes.

Dr. Gerrish was requested by the Association to further pursue his investigations on the administration of ether, and report at the session of next year

DR. H. E. HILL, of Saco, read a paper, reporting

SIX CASES OF OVARIOTOMY.

All were successful except one, death occurring from shock in four days. The heaviest tumor was forty pounds, the lightest twenty pounds. The highest temperature reached was 101½°. All the cases but one, and that the fatal one from shock, were operated upon by the Lister method. A special point made, was that these were from the practice of a general practitioner and not from that of a specialist.

DR. S. H. WEEKS stated that his best results in ovariotomy had been in private practice, notwithstanding the fact that his hospital experience was attended by arrangements for convenience and cleanliness surpassed nowhere.

The report of Dr. C. E. Webster, *Delegate to the Massachusetts Medical Society*, was received and read.

EVENING SESSION.

Dr. D. O. King, *Delegate from the Rhode Island Society*, was introduced and responded briefly.

PHOSPHORUS NECROSIS OF THE INFERIOR MAXILLA

was the title of a paper read by DR. WEEKS, of Portland, illustrated by exhibition of half of an inferior maxilla and the patient from whom it was removed. The appearance of the diseased bone suggested that the disease had obliterated the inferior dental artery, thus cutting off the blood supply to the bone.

Early and extensive operation was urged as the only certain means of cure, while general supportive measures and antiseptic washes were by no means to be neglected. Local irritation was regarded as the primary cause of the difficulty, and the constitutional suffering as secondary to it.

DR. WEEKS also read a paper on

OÖPHORECTOMY,

outlining the steps of the operation, the indications for its performance, and some facts bearing upon the results of these operations. It was regarded as a *dernier ressort* on account of its difficulties, dangers, and doubtful results. The writer believed that this operation would be less frequently called for in the future, just in proportion as we perfect our knowledge in the management of uterine and nervous diseases. A case was cited, the operation having averted impending insanity. The ovaries were found diseased. The right, cystic and of the size of an English walnut. The left, twice its natural size.

DR. GORDON believed, with the means of operating now at our command, that either Tait's or Battey's operation was safe. From his experience with a large

number of cases, he felt that the results certainly justified the operation. He preferred abdominal section, and before judging the results, time ought to be given to recuperate from the long nervous depression always existing.

DR. S. LAUGHTON, of Bangor, read a paper on

MICROORGANISMS,

based upon experimental study. The writer was evidently thoroughly convinced of the truth of Koch's theory, and cited a case in his own practice in which he had seen, by daily examination of sputa, the bacilli made to disappear by antiseptic inhalations. The sentiment of the Association seemed to be that the question is still *sub judice*.

WEDNESDAY, JUNE 11TH—SECOND DAY.

MORNING SESSION.

DR. SARAH ELLEN PALMER, of Portland, read a paper on

THE INDUCTION OF PREMATURE LABOR IN ALBUMINURIC RETINITIS.

The conclusion drawn was that although highly albuminous urine, dropsical effusion, and threatened convulsions may give way to recovery, yet the absence of these complications may only preclude death, when the only symptom has been loss of vision. Should not, then, this symptom be also a warning; and why may not labor be induced to save the mother's sight, when, from a series of reported cases, the unfavorable indications of this sudden blindness are so well established?

DR. J. A. SPALDING, of Portland, presented a supplementary paper, detailing the ophthalmoscopic appearance of the eyes in the case of Dr. Palmer's patient.

Dr. C. W. BRAY, of Portland, reported a case of

APOPLEXY IN A GIRL THIRTEEN YEARS OF AGE.

The autopsy revealed a recent clot in the middle lobe of the left cerebrum, and in the corresponding lobe on the right side a cavity filled with dark, urine-colored fluid. A microscopical examination demonstrated this to be an apoplectic cyst. It had no communication with any of the cavities or vessels of the brain, nor were there any tubercular deposits.

DR. J. A. DONOVAN, of Lewiston, reported

THREE SURGICAL CASES,

the first of special interest. A lad, ten years of age, was caught by a belt and whirled about a pulley some forty times, causing a fracture of the left parietal bone, a comminuted fracture of the left femur, with compound lower epiphyseal separation; the condyles of the right femur were denuded, and protruded through an extensive rent in the popliteal space about four inches; the left femur was fractured just below the trochanter major, the condyloid epiphysis separated, and the intervening shaft comminuted. Notwithstanding such extensive fracture the skin was not broken. The popliteal laceration was so extensive that the inner hamstring tendons were stripped of their investment, the saphena was exposed, and the artery displaced. The condyles were removed, when the shaft of the femur came into apposition with the knee-joint—certainly an unusual occurrence. The boy and exsected condyles were exhibited to the Association. There is good movement at the knee, and the growth of the limb is keeping pace with its fellow. The extensors of the leg are paralyzed from laceration of the nerve trunks, otherwise the boy did not seem to have seriously lost by his injury.

The second case was one of death from meningeal inflammation having its origin in chronic non-suppurative inflammation of the middle ear.

The third, an abdominal tumor having its origin behind and from the left kidney, resulted in death.

PROF. ALFRED MITCHELL, of Brunswick, presented a paper on the

PREVENTIVE TREATMENT OF PERINEAL LACERATIONS.

The points made were: 1st. Lengthening of the vaginal canal by bringing the perineum forward and downward by well-directed pressure. 2d. Keeping the centre of the arc described when the head passes through the vulva, well forward against the pubis.

DR. GORDON believed that the auxiliary forces of the abdominal muscles had much to do with causing parturient injuries; he did not allow them to be voluntarily exerted.

DR. O'BRIEN, of Bristol, said he wished to protest against the advice given by teachers to use several folds of a napkin for cleanliness to the hand; besides being a hinderance to the proper use of the hand, it wiped away the natural lubricant which kept the perineum moist, and soon proved itself, "like self-righteousness, a filthy rag."

DR. MERRILL, of Portland, exhibited a patient having a *Tumor in front of the Larynx, of Obscure Origin*, but apparently connected with the trachea.

AFTERNOON SESSION.

The Society proceeded to the

ELECTION OF OFFICERS,

with the following result.

President.—Dr. T. A. Foster, of Portland.

First Vice-President.—Dr. S. Laughton, of Bangor.

Second Vice-President.—Dr. Abial Libby, of Richmond.

Corresponding Secretary.—Dr. S. W. Johnson, of Dixmont.

Recording Secretary, Dr. Charles D. Smith, of Portland.

Board of Censors.—Drs. George H. Cummings, of Portland; B. F. Sturgis, of Auburn; E. Adams, of Litchfield; H. E. Hill, of Saco; A. L. Hersey, of Oxford.

DR. A. L. HERSEY, of Oxford, then delivered a scholarly oration, mainly a *resumé* of

MODERN MEDICAL THEORIES.

Many of them were regarded as far from proved. There has been far too much of the theoretical and too little of the practical; but now the old questions are reasserting themselves. The proper education of the people in sanitary and hygienic reforms should originate in the public schools. No physician can be too highly educated. Dr. Hersey is the first physician, himself not an instructor in a medical school, from the Maine Medical Association, to denounce the education of medical students in any other way than by thoroughly graded courses of study in medical preparatory schools. The address was received with marked interest, and a copy requested for publication.

A voluntary paper on *Carcinoma of the Breast*, was presented by Dr. Charles R. Crandall, of Portland.

DR. S. C. GORDON, Necrologist, reported the deaths during the year, of Drs. J. T. Gilman, of Portland; J. S. Goodwin, of Portland; C. W. Whitmore, of Gardiner, and Wm. Swasey, of Limerick; and presented by title an obituary notice of Dr. Whitmore.

EVENING SESSION.

DR. S. H. WEEKS presented a paper upon a case of injury to the eye resulting in

MONOCULAR DIPLOPIA.

The injury was a slight blow upon the bridge of the nose from a bat; slight injury was also inflicted over the right eye.

The patient was a boy twelve years of age. Although the eye was somewhat swollen, there was no apparent inflammation, and on the same evening he attended a public entertainment without any trouble from his eye; on the day following, he read continuously; on the third day he had photophobia. Three weeks from the date of injury, there were great photophobia, pain through the temple, and double vision limited to the right eye. The query arose, was it due to some change in the meridian of the cornea, or was it caused by displacement of the lens? The retinal vessels were congested; the fundus somewhat indistinct; the appearance of the retinal vessels and optic disk was apparently due to irregular refraction of the rays of light. The conclusion was that the irregularity of refraction depended upon a displacement of the lens. Astigmatic glasses had no effect upon the diplopia in any possible meridian of their axes. There are two important questions to be considered.

1. If due to displacement of the lens, why did not double vision immediately follow the injury?

2. Why, also, if displaced, did not the lens become opaque?

The Doctor's opinion was, as to the first query, that from a laceration of a portion of the attachment of the ciliary muscles, the lens was gradually displaced by the irregular action of the ruptured muscle of accommodation. As to the second query, it is known that, if the capsule be not ruptured, a lens may be displaced for months without becoming opaque.

There was never any inflammation of cornea, iris, or lens, and the media were always transparent. The treatment was early leeching of the temple, and the application to the eye night and morning of a solution of atropia, four grains to the ounce, with a view not only of dilating the pupil, but of putting at rest the muscles of accommodation. Tonic measures were also prescribed. After the relief of the disturbed condition of the eye, the diplopia still persisted, and was only relieved by the use of stenopæic glasses with a wide slit. The diplopia has never entirely disappeared, the original injury having been received in April, 1883.

DR. SPALDING considered this case one of great rarity. There were no changes in the media or fundus of the eye; it was doubtful whether the blow with the bat had excited so-called coarse alterations in the brain. He believed that in Dr. Week's case there must have been some cerebral commotion or hemorrhage excited by the blow. If extensive hemorrhage into the brain sometimes causes diplopia and death, why might not slight hemorrhage cause diplopia alone, which would disappear when the clot became absorbed? Simulation may be excluded, for so young a patient would not be likely to have heard of so rare a symptom as double vision; and hysteria is altogether improbable.

DR. WEEKS, in reply, said that the absence of any cerebral symptoms precluded the idea of cerebral hemorrhage, neither did the diplopia suddenly appear.

In reply to a query as to the position of the misplaced lens, Dr. Weeks said that the strong atropia solution used had put the ciliary muscle at rest, and allowed the fibres to heal; and thus the lens had been gradually drawn back into place, the rupture of these fibres not having been complete.

A paper by Prof. Weeks on *Ligation of the External Iliac Artery for the Relief of Femoral Aneurism*, was presented by title.

PROF. I. T. DANA then spoke upon

UNDEVELOPED TYPHOID FEVER,

taking the ground that, whereas in former years typhoid fever was definitely and typically developed, it has now, in the greater part of our State, become of less severity, not so well developed—in fact, "atypical."

DR. J. T. G. NICHOLS, Delegate from Massachusetts, said that in Cambridge there had been a steady decrease in both the frequency and severity of typhoid during the past twenty-five years. This he attributed to the improvement of sewerage and water supply; still it was a fact that in Boston and some other localities in Massachusetts, it had raged with frightful severity.

DR. HORR, the President, stated that while in most parts of Maine typhoid fever was infrequent, yet it was a fact that Lewiston, a large manufacturing city, was rarely entirely free from it, even in the cold winter months, yet it was surprisingly mild in type. Many other gentlemen took part in the discussion, and opinion seemed about equally divided as to the question of incomplete or undeveloped typhoid.

DR. O'BRIEN, of Bristol, reported that in his town typhoid had for years been of a very mild type, yet one of his families had removed to Provincetown, Mass., having a convalescent with it, and had there started an epidemic of remarkable severity.

DR. DANA feared that the disease was only quiescent, and would again appear with its old-time severity.

JUNE 12TH—THIRD DAY.

CLOSING SESSION.

Dr. Alonzo Garcelon, of Lewiston, presented a report as Delegate to the American Medical Association.

On motion of PROF. S. H. WEEKS, a committee of five was appointed to consider the propriety of extending an

INVITATION TO THE AMERICAN MEDICAL ASSOCIATION

to hold its meeting in 1886 in Portland. If that event ever takes place, the profession will take care of the Association, and furnish it with such accommodations for meetings as it has not had for ten years. Our hotels are numerous and first-class, and city and State pride would leave nothing undone. This was the universal sentiment.

Resolutions of congratulation at the success and prosperity of the Maine General Hospital were passed.

A committee was appointed, consisting of Dr. William Wood, I. T. Dana, and S. H. Weeks, to draft suitable resolutions on the

DEATH OF DR. JOHN T. GILMAN,

Ex-President of the Association, and the "father" of the Maine General Hospital. Dr. Gilman occupied a high place in the esteem of the profession of this State, and was widely known as an upright, learned, and public-spirited physician and citizen.

After the usual votes of thanks the Association adjourned, to meet in Portland on the second Tuesday in June, 1885.

The meeting was one of unusual interest; the attendance was larger than for many years. Twenty-three new members were added to the roll, and the work was uninterrupted by any elements of discord. In years past the Association meetings have been attended by representatives of various drug and surgical instrument firms, to whom was allotted space for exhibits. Circumstances of location have rendered these exhibits impossible during the past two years, and greatly to the benefit of the meetings. There are no outside attractions now to draw members from the hall to the ante-rooms and corridors, and members have made a business of attending the meetings. The sentiment of the Association strongly condemns a return to the old order of affairs, and the change is agreeably appreciated. The Maine Medical Association by no means objects to exhibits during its meetings, but much prefers them apart from its meetings.

MEDICAL SOCIETY OF NEW JERSEY.

One Hundred and Eighteenth Annual Meeting, held at Cape May, June 10 and 11, 1884.

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, JUNE 10TH—FIRST DAY.

THE one hundred and eighteenth annual meeting was convened in the Stockton Hotel, Cape May, on June 10th. The Convention was called to order by THE PRESIDENT, DR. S. WICKES, of Orange. After prayer by the Bishop, the Committee on Organization made its report, from which it appeared all the District Societies had paid their dues, and had returned a list of delegates as required by law. An unusually large attendance of delegates and invited guests was present. All the district societies, excepting Bergen, were represented by delegates.

DR. JAMES MECRAY, in welcoming the Society, said: There are many things of which we feel justly proud, our magnificent beach affording perfectly safe bathing by its very gradual descent, and regular, hard, smooth surface, with the fast land coming down to the very edge of the water. Our excellent, well-planned sewer system, laid down in almost every one of our streets, having sufficient fall to carry off all effete matters far away from the town, giving such a sanitary condition that the mortality of both city and county is the lowest of any in the State. This is not a thing in prospect, depending upon companies to complete, but "un fait accompli," and that by our own efforts. Our State Board of Health, through its Secretary, has expressed unqualified approval and commendation of our system.

Our water supply is in most excellent condition, furnishing about one million gallons daily, and distributed through all the most thickly settled portions of the town, giving an abundant supply of pure, fresh water, not from surface springs, but drawn from the very bowels of the earth, and stored in three large tanks, and from them distributed through mains to every part of the city.

We will not consume your time by mentioning facts relative to our humidity, temperature, and prevailing winds, but would refer to a very able report of Prof. Smuck, Assistant State Geologist, well worth perusal by all seeking healthful, pleasant resorts either summer or winter. Some remarkable facts are brought to light in this report, giving us the advantage over all other seaside resorts in equableness of climate in this country with the single exception of Key West.

His Honor, the Mayor of Cape May, followed in a pleasing address, cordially welcoming the members of the Society to the hospitality of the city.

The Committee appointed at the last annual meeting to

AUDIT TREASURER'S ACCOUNTS,

reported a balance of $1644.22, of which $1550 are invested in United States four per cent. bonds, $182.81 in cash remaining in the Newark Saving Institution, and $88.99 in the hands of the Treasurer.

As directed by the Society, the Treasurer has furnished a bond to the amount of $5000, which is now in possession of the Secretary.

The report was adopted, and the Treasurer was instructed to exchange the United States four per cent. bonds for United States registered bonds.

EVENING SESSION.

The Corresponding Secretary presented his report.

THE TREASURER'S REPORT.

The Committee on Treasurer's accounts subsequently reported the amount to be correct, and they recommended that the assessment of the District Societies for next year be $1.50 per capita.

The report was adopted and Committee discharged.

THE PRESIDENT, DR. STEPHEN WICKES, of Orange, in his annual address, took for his theme

LIVING AND DYING, ITS PHYSICS AND PSYCHICS.

He described the various modes of death by the head, by the heart, and by the lungs. He delineated the various symptoms occurring in each mode, and drew attention to the importance of the physician fully appreciating the meaning of the symptoms and recognizing the dangers, in order that he might be more effective in warding them off. He then described these different symptoms more definitely, as well as the signs of impending dissolution and of actual death.

THE REPORT OF THE STANDING COMMITTEE

was then presented by DR. T. J. SMITH, Chairman.

In review of the reports of the county societies, the medical history of the year may be epitomized as follows:

First. A diminished amount of disease throughout the State. *Second.* Epidemics have not prevailed to any great extent, and were of diminished intensity. *Third.* Diseases of the respiratory organs, though common, were observed in less severe forms, and were

more than usually amenable to treatment. *Fourth.* An extraordinary freedom from diseases of the intestinal canal. *Fifth.* Less scarlatina, diphtheria, and other cases of contagious disease, except measles, which was unusually prevalent. *Sixth.* Fevers, which always call for a large share of professional attention, have nowhere shown a marked fatal tendency.

In therapeutics the committee note a tendency to use quinia in large doses. The salicylates and aconite are widely recommended in rheumatism. A case of congestive chill relieved by venesection to twelve ounces was reported by Dr. Morris.

The use of digitalis in teaspoonful doses of the tincture is recommended in typhoid fever; such medication causing relief from delirium and favoring sleep. The observer who reports its use has seen none of the cumulative effects of the drug.

From Essex are reported two cases of rectal anæsthesia. In these cases all the reputed advantages were apparent, but in both cases were followed by serious symptoms of intestinal irritation.

Dr. Dorms reported a case of omental encephaloid disease not diagnosticated ante-mortem, but associated with cerebral symptoms. Dr. Carll reported two cases of abscess in the neighborhood of the colon, discharging by the rectum, and another of abscess between the liver and diaphragm, discharging by the lungs.

As items of professional interest, were noted the establishment of a course of instruction in the Newark Eye and Ear Infirmary by Dr. Kipp. The publication of the *Archives of Pediatrics*, by Dr. W. P. Watson, of Jersey City. The establishment of the Burlington County Hospital, and of the Newark City Hospital. St. Barnabas Hospital is also to be enlarged.

The prevalence of malaria at the Newark Reform School, and its apparent connection with a polluted supply of drinking water, is reported by Dr. Whitehorn.

WEDNESDAY, JUNE 11TH—SECOND DAY.

THE SPECIAL COMMITTEE ON EDUCATION

presented the following:

Resolved, That this Society approve and adopt the recommendations of the Special Committee on the curriculum of preparation to be required of persons contemplating the study of medicine in this State, as contained in the report presented at the last annual meeting of this Society.

That to carry out the recommendation of said report in regard to a censorship, as therein contemplated, this Society is of opinion that two Boards of Censors be appointed by the Standing Committee, each year, consisting of five members of this Society, one for the northern and one for the southern part of the State; to whom should be presented for approval the credentials of all persons proposing the study of medicine, and in case of the insufficiency of such credentials to examine the applicant in the branches of science and learning indicated in the report of this Committee.

That the Standing Committee prepare and report to the Society for its adoption, such amendments of its by-laws as are necessary to carry out these plans and recommendations of this Committee.

That the Corresponding Secretary communicate the action of this Society on this subject to the district medical societies in this State, with instructions to adopt such regulations as shall effectually secure the observance, in their several localities, of the measure adopted by this Society.

That the Corresponding Secretary communicate the action of this Society on this subject to the State medical societies of the several States of the Union, and respectfully request their coöperation with us in this effort to elevate the standing of medical education throughout the country.

The resolutions, after considerable discussion, were adopted.

On motion of DR. E. M. HUNT, the following resolutions were adopted:

Resolved, That the Special Committee on Education be continued, and be requested to report next year to the Society, what is feasible to be done to test the competency of graduates of various medical colleges who hereafter seek to settle in this State.

On motion of DR. HUNT, it was

Resolved, That a committee of three be appointed by the President, to report this afternoon, what in its judgment can or ought to be done by county medical societies or by local officers, to prevent unlicensed persons from practising in this State. The following were announced as the committee: Drs. Parrish, Pennyton, and Welch.

A REPORT ON MEDICAL JURISPRUDENCE

was presented by DR. GARRISON. The report urged the necessity of having expert witnesses, recognized as such in the eye of the law, and also urged that expert witnesses be employed by special selection.

After some discussion, the report was referred back to the Committee on Amendments.

In connection with this subject, DR. E. M. HUNT offered the following, which was adopted:

Resolved, That this Society recognize the importance of some legislation as to the best modes of securing expert witnesses.

The Committee on

ARMY MEDICAL MUSEUM AND LIBRARY

of the Surgeon-General's Office, presented the following:

Whereas, It is the opinion that the Medical Museum and the Library of the Surgeon-General's Office at Washington, D. C., have been largely instrumental in the advancement of sound professional and scientific knowledge, and that they give promise of still greater usefulness in the future, and

Whereas, It is learned with regret, that both these collections are in great jeopardy from fire or accident through the insecurity and unsuitableness of the building in which they are now stored; it is

Resolved, That Congress be respectfully urged to provide suitable indestructible quarters for these invaluable treasures, to secure them against any possible contingency of loss or damage.

Resolved, That it is the sense of this meeting, that the management of these national collections has been eminently successful in the past, and that any change of administration would not only be injurious to these interests, but would cast an undeserved stigma upon the office of the Surgeon-General of the Army.

Resolved, That we again respectfully petition Congress

to provide suitable annual appropriations for the increase and preservation of the Museum and Library, and also for carrying on the valuable *Index Catalogue* of the Surgeon-General's Office.

Resolved, That a committee of three be appointed by the Chairman of this Society, to prepare a suitable memorial, which shall be printed and sent to each of our Representatives in Congress.

The following committee was appointed by the President: Drs. B. A. Watson, H. G. Taylor, and E. M. Hunt.

DR. PARRISH, on behalf of the

COMMITTEE ON LUNACY

in the State of New Jersey, made a full report, and recommended the following, which were adopted:

Whereas, The Legislature of the State of New Jersey having, at its session of 1883, passed an Act entitled, "An Act to create a Council of State Charities and Correction," it is deemed of sufficient importance to the health and well-being of the people as to call for congratulations by the Medical Society of New Jersey; therefore,

Resolved, That the Medical Society of New Jersey, in annual meeting assembled, at Cape May, June 10th and 11th, 1884, welcome the appointment by the Governor of the State of a Council of State Charities and Correction, as an additional and coöperative factor with the Medical Society in correcting the neglects and abuses to which the insane poor of the State are subjected, especially in the County Almshouses throughout the State;

Resolved, That in congratulating the community upon the existence of such a Council, the Medical Society of the State, the District Societies in the different Counties, and individual physicians in their respective homes, will cheerfully coöperate with said Council in all suitable and legitimate plans to secure the results contemplated by law.

DR. C. J. KIPP, Third Vice-President, then read an essay on

THE PREVENTION AND TREATMENT OF PURULENT CONJUNCTIVITIS.

He said that the treatment which he had found most useful in the purulent ophthalmia of the new-born, consists of cold applications to the lids, and frequent cleansing of the eyes with tepid water, to which may be added boric acid, carbolic acid, permanganate of potash, the bichloride of mercury, or other disinfectants. He has found simple water as efficacious as the solutions named. Nothing else is done till the swelling of the lids has somewhat subsided, and they can be everted without difficulty; the conjunctiva has ceased to be smooth and lustrous, and is succulent and relaxed, and the discharge is no longer serous and of a straw color, but is decidedly thick and creamy. When this stage has arrived, he begins with daily applications of a one per cent. solution of the nitrate of silver, and if this is not followed by severe reaction, and the discharge continues profuse, he substitutes a two per cent. solution for the weaker one. As a rule, one application in twenty-four hours is sufficient, but in cases in which the discharge is very profuse, and the swelling of conjunctiva excessive, the solution is applied every twelve hours, until a marked improvement is apparent; after that the application is again made once every day, and later a one per cent. solution is again substituted. Under this mode of treatment the author has not lost a single case that came under his care during the first days of the disease. After describing the affections of the cornea which are found in cases which have been neglected or maltreated, he advised the use of atropia and eserine in addition to the nitrate of silver application, which should be continued, whether affections of the cornea are present or not, as long as the discharge is copious.

With regard to prophylaxis, the author thinks that inoculation can be prevented by carefully wiping the eyelids of the infant immediately after birth, and by thoroughly cleansing the conjunctival sac with plenty of clean tepid water in cases in which the mother is known to have a vaginal discharge. He advocates the dissemination of knowledge among the people as to the causes and the curability of this disease under proper treatment, and the great danger of hopeless blindness from neglecting this disease. He thinks that the State Board of Health should take hold of this matter.

Gonorrhœal conjunctivitis he has treated in about the same way as the ophthalmia of the new-born, and, in addition, has often in the first stages of the disease applied leeches to the temple. In severe cases he has also scarified superficially the conjunctiva immediately after the cauterization. To relieve the pressure of the lids, he has divided the outer canthus by means of scissors. Corneal affections arising in the course of the disease do not, in his opinion, contraindicate the use of caustic. Infiltrations in the cornea call for atropine, and deep ulcers for puncture of the floor of the ulcer and the pressure-bandage. Although the caustic treatment does not by far give as good results in this form of purulent conjunctivitis as in ophthalmia neonatorum, it is superior to every other mode of treatment which the author has tried. In cases in which one eye was affected at the time the case came under treatment, the author formerly sealed up the sound eye with a pad of cotton-wool and adhesive plaster; more lately he has made use of Dr. Buller's shield of mackintosh with a hole in the centre, in which is inserted a watch-glass, to enable the patient to see. With intelligent and cleanly patients, there seems to be but little need for such protection, as is seen from the fact that in all (nine) cases of gonorrhœal conjunctivitis of one eye only which he has treated in the last few years, the disease did not attack the other eye, although no other precaution was taken than to warn the patient and the nurses against inoculating the sound eye. To show that these cases were not mild ones, it is stated that in only one of them did the cornea remain intact; in five the cornea was totally destroyed; and in the other three it was seriously damaged.

DR. GEORGE T. WELCH then read an essay on *Many Drugs and Few Remedies*.

Drs. Thomas Addis Emmet and Isaac E. Taylor, of New York, having been duly recommended by the committee, were elected

HONORARY MEMBERS

of the Society.

A MEDICAL SOCIETY IN CAPE MAY.

A petition from the physicians of Cape May, asking for a commission to organize a medical society in that county, was received, and on motion it was ordered that a commission be granted.

Drs. Wickes, W. P. Watson, and E. M. Hunt were appointed the Committee on the "Fellow's Prize Essay," and they were instructed to select a subject for the essay, and publish the same in the medical press.

The following were then elected

OFFICERS FOR 1884:

President.—P. C. Barker, M.D., of Morristown.

Vice-Presidents.—Drs. Joseph Parrish, C. J. Kipp, and J. W. Ward.

Recording Secretary.—Dr. Wm. Pierson, of Orange.

Corresponding Secretary.—Dr. Wm. Elmer, Jr., of Trenton.

Treasurer.—Dr. W. W. L. Phillips, of Trenton.

Standing Committee.—Drs. T. J. Smith, E. J. Marsh, and D. C. English.

It was voted that the next annual meeting of this Society be held at Long Branch, on the second Tuesday in June, 1885.

Dr. H. H. James was appointed *Essayist* for the next meeting.

THE PRESIDENT appointed the following *Committee of Arrangements* for the next annual meeting: Drs. S. H. Hunt, H. R. Baldwin, D. M. Forman, W. H. Shipps, and Henry Mitchell.

After the adoption of the usual votes of thanks, the Society adjourned.

OHIO STATE MEDICAL SOCIETY.

Thirty-ninth Annual Meeting, held at Columbus, June 10, 11, and 12, 1884.

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, JUNE 10TH—FIRST DAY.

THE Society convened in Lyndon Hall, and was called to order at 2 P.M., by the PRESIDENT, C. P. LANDON, M.D., of Westerville.

Rev. Colonel Anderson opened the session with prayer, after which THE PRESIDENT, in a short and appropriate address, thanked the members for the honor of his election, and called attention to the important questions which would come before them for discussion.

THE SECRETARY, DR. COLLAMORE, of Toledo, presented his Annual Report, from which the unwelcome fact is learned, that twenty of the auxiliary societies have abandoned their organizations. It is, however, fair to state, that many of these have been defunct for several years, and that some are replaced by other organizations acting in harmony with the State Society.

DR. SHARP, of London, introduced the following resolution concerning the establishment of a

STATE BOARD OF HEALTH,

the discussion of which and kindred resolutions, occupied more than one-half the working hours of the meeting.

Whereas, There are now pending in the two houses of the Legislature of Ohio, different bills, having for their purpose the establishment of State boards of health and medical examiners; therefore, be it

Resolved, That a committee of five be appointed, to which these several bills shall be committed for revision, and which shall report such revised bill for adoption by this Society, on Wednesday morning.

The committee was composed of Drs. Sharp; Weaver, of Dayton; Reed, of Hamilton; Gill, of Cleveland; and Baldwin, of Columbus.

REPORT OF DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION.

DR. DUNLAP, of Springfield, made a verbal report, dwelling chiefly upon the work of the Section on Obstetrics and Diseases of Women. His remarks led to the discussion of the treatment of the pedicle, in the removal of uterine and ovarian tumors, and was participated in by Drs. Reeve, of Dayton and Sutton, of Pittsburg, Pa. The latter spoke upon invitation, and was subsequently elected to honorary membership.

The session was closed with a paper on *The Races*, written in blank verse, by Dr. Wark, of Ontario.

EVENING SESSION.

The Society was called to order by VICE-PRESIDENT, DR. E. SINNETT, of Granville.

By special action of the Committee of Arrangements, this session was devoted wholly to the subject of

MEDICAL LEGISLATION AND EDUCATION.

DR. SHARP opened the discussion with an able and convincing written argument in support of the following resolution, of which he was the author.

Resolved, That the public good and the higher interests of the Medical Profession would be promoted by the establishment of a State Board of Medical Examiners; that such Board shall be independent of all Medical Schools, and be empowered to examine and pass upon the moral fitnesss and literary and medical attainments of all applicants for admission to the practice of medicine, and to grant license to practise medicine in the State of Ohio, to such only as shall have passed a satisfactory examination before said Board; that Medical Schools shall continue their functions of teaching and conferring degrees of M. D. only, with no powers whatever to grant license to their graduates, admitting them to the practice of medicine.

The discussion gradually drifted into a comparison of the several bills now before the Legislature. The debate was generally participated in by the members, and consisted largely in a repetition of the stock arguments on such occasions. The session closed without reaching a vote.

WEDNESDAY, JUNE 11TH—SECOND DAY.

MORNING SESSION.

Discussion was continued upon Dr. Sharp's resolution for the establishment of

A STATE BOARD OF MEDICAL EXAMINERS,

until finally, a vote being taken, it was carried by a large majority. Immediately following this vote, the Special Committee appointed to report back a medical bill which should harmonize all interests, submitted the fruits of their work.

The bill provides for the appointment by the Governor of a State Board of Examiners of nine reputable physicians, graduates of legal medical colleges, and who have practised medicine for not less than ten years, but none of which shall be connected with any medical school or college. Each of the State societies, representing the different schools of medicine, submits fifteen names, from which the Governor selects the nine composing the board. Of these nine members, three serve in the first organization for three years, three for four, and three for five years. At the expiration of the terms fixed above, all appointments shall be for a term of five years. The board shall examine all applicants, irrespective of diplomas, for license to practise medicine or surgery in this State. The bill makes no provision for a State Board of Health.

The bill as reported by the Committee is essentially the same as that now before the Legislature, and generally known throughout the State as the Scott Bill. It has already been endorsed by many local societies.

A hot discussion at once began. The bill was opposed for many reasons, the more prominent ones were that the appointing power being vested in the Governor the Board would speedily degenerate into a political machine, and because of the proviso which excludes members of medical college faculties.

DR. REAMY, of Cincinnati, took the ground that the members of the Board of Examiners should also be examined in order to determine their competency to discharge the duties of State Examiners, and offered the following amendment to the report of the Committee:

Provided, That no man shall serve on said Board until he has won his position by a competitive examination made by a committee appointed by this Society; said examination to be conducted orally and in public, at the capital of the State.

Amid considerable excitement the report was laid upon the table, not because a majority were opposed to it, but simply because the patience of the members was exhausted by the length of the discussion.

DR. KINSMAN, of Columbus, then read a report upon

TUBERCULOSIS.

The following conclusions were stated: Tuberculosis may be communicated by inoculation, ingestion, or inhalation of tuberculous matter. Tubercular processes in man and animals are identical. It seems proved that the bacillus tuberculosis is the active infectious agent. It is probable that we are acquainted with two forms in the life-history of this parasite, the rod and the spore, and the injection of either will produce bacillar lesions. The capacity for aërial infection seems to be the only test for *true* tuberculosis. For the occurrence of tuberculosis in any given case two factors are necessary, the proper soil and the infectious agent. The first, which we call predisposition, is either hereditary or acquired. By conceding the bacillus as a factor, we are not logically required to address our treatment to this factor alone, but, as heretofore, we must use all means to extinguish the predisposition. For the present, the only means at command, in the treatment of the second factor, is to regard every patient as a focus whence contagion may arise, and by the systematic collection and destruction of his bacillus-bearing excreta, prevent the access of the germ to other persons who are predisposed to consumption.

AFTERNOON SESSION.

THE PRESIDENT delivered his *Address*, which fully met the expectations of his many friends. The several live medical issues of the day were ably and eloquently discussed.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—J. C. Reeve, M.D., of Dayton.

Vice-Presidents.—E. B. Pratt, M.D., of Mt. Sterling; B. W. Davis, M.D., of Marion; C. R. Merriman, M. D., and J. F. Baldwin, M.D., of Columbus.

Secretary.—G. A. Collamore, M.D., of Toledo.

Assistant Secretary.—C. E. Brush, M.D., of Zanesville.

Treasurer.—T. W. Jones, M.D., of Columbus.

In the *Committee on Admissions*, the two vacancies were filled by the election of Drs. Reed, of Hamilton; and Fowler, of Delaware.

Committee on Publication.—Dr. Conklin, of Dayton, was elected to fill the vacancy.

Dr. Reed, of Mansfield, to the *Committee on Ethics;* and Dr. Herrick, of Cleveland, to the *Committee on Medical Legislation.*

Upon invitation of the Montgomery County Medical Society, Dayton was named as the *place of meeting in 1885.* The *date* was subsequently fixed on the first Wednesday in June, 1885.

DR. BEACH, of London, offered a resolution of sympathy for Dr. John B. Thompson, of Columbus, one of the charter-members of the Society, who is prostrated by sickness with little hope of his recovery. The resolution was passed unanimously.

THE COMMITTEE ON ETHICS

now made its report, sustaining the charges of unprofessional conduct against Dr. E. C. Lewis, of Canal Dover, and recommending his expulsion from the Society. One of the charges upon which the Doctor was found guilty, was that of procuring an insurance, in his own name, on the life of a patient at that time under his care with cancer of the uterus. The finding of the Committee was accepted without discussion.

DR. W. J. SCOTT, of Cleveland, then read an interesting report upon *Impurities in Drinking Water.*

DR. S. F. FORBES, of Toledo, presented a paper on

THE NECESSITY FOR THE RADICAL OPERATION IN EMPYEMA.

He urged the importance of early operation, and maintained that a large proportion of the unsuccessful results were due to delay in operating. He makes a free incision in the chest-wall, and washes out the cavity with a weak solution of carbolic acid. In cases operated on early, he believes the employment of the drainage-tube generally unnecessary, and occasionally leading to the formation of troublesome fistulæ.

ENTERTAINMENTS.

In the evening the members were elegantly entertained by Drs. Starling, Loving, and J. W. Hamilton, at their respective residences.

THURSDAY, JUNE 12TH—THIRD DAY.

MORNING SESSION.

Immediately after the reading of the minutes

THE IRREPRESSIBLE MEDICAL LEGISLATION QUESTION

again came up, and on motion of DR. X. C. SCOTT, the report of the Special Committee was taken from the table.

On motion of DR. WEAVER, the amendment of Dr. Reamy was stricken out, and, amid much applause, the report as originally presented was adopted.

THE PRESIDENT promptly appointed the following Committee to look after the interests of the bill and urge its passage by the Legislature:

Dr. X. C. Scott, of Cleveland; Dr. J. J. King, of Bing Hill; Dr. J. M. Weaver, of Dayton; Dr. H. J. Sharp, of London; Dr. W. H. Phillips, of Kenton; Dr. C. A. L. Reed, of Hamilton; Dr. D. N. Kinsman, of Columbus; Dr. J. F. Baldwin, of Columbus; and Dr. G. T. Franklin, of Chillicothe.

THE COMMITTEE ON FINANCE

reported the accounts of the Treasurer correct, and a balance in the treasury of $800.82. The Committee fully exonerated Dr. J. F. Baldwin from the anonymous charges made against him some time since in one of the Columbus papers. The charges were investigated at the request of Dr. Baldwin, although the action of the Society in keeping him in office was sufficient refutation, without the formality of an investigation.

DR. H. P. ALLEN, of Columbus, then read a carefully prepared paper on

THE PUPILS AS A FACTOR IN DIAGNOSIS AND ETIOLOGY.

He entered quite lengthly into the anatomy and physiology of the optic nerve tracts and the pupils. He illustrated fully the well-known proposition, that all conditions which cause pressure on the brain are attended with dilatation, and that all irritative conditions cause contraction of the pupils.

DR. R. HARVEY REED followed with a paper on

IRRITATION OF THE PROSTATE.

The author described three forms of irritation, congestive, catarrhal, and nervous, each of which is not manifested by the constitutional disturbunces, or destructive changes in the gland, such as characterize acute prostatitis on suppuration. The causes of irritation of the prostate were given as masturbation, excessive sexual indulgence, venereal diseases, exposure, and traumatisms. It frequently results in impotency.

The treatment is tonic, alterative, and sedative, with such local applications as the condition may suggest.

Dr. J. W. Craig, of Mansfield, read an interesting paper, based on a large personal experience in the *Treatment of Varicose Veins*.

DR. W. M. BEACH'S report on *Milk Sickness* was an exhaustive study of the subject. The author has had large experience in this rare disease, and ranks as one of the authorities upon it. His views are already familiar to the profession through former articles, especially the paper before the American Medical Association in 1883.

AFTERNOON SESSION.

Owing to the fact that but a few hours yet remained before the final adjournment, the following papers were read and referred, without discussion, to the Committee on Publication.

DR. JOSEPH RANSOHOFF read a paper on

SANGUINEOUS CYSTS OF THE NECK.

The paper was based upon a case of which a photograph and specimen were presented. The tumor was of fourteen years' growth, and extended from the mastoid process to the sternum. It was of the size of two fists. Fluctuation distinct. Subdivided into two parts by the sterno-mastoid muscle. Did not disappear, nor was it reduced in size by pressure. Aspiration yielded almost pure blood. Extirpation was practised and the patient made an excellent recovery. Examination of the cyst showed it to be thin-walled and lined in many places with flat endothelium. The internal surface was smooth in places, and in others presented trabeculæ like the chorda tendinæ of the cardiac ventricles. Valve-like folds were also present. The author believed this tumor to be a primary sanguineous cyst. Where extirpation can be practised, he preferred it to aspiration or incision. The former is not devoid of danger and rarely successful, and incision often leaves fistulæ which fail to close.

Dr. Landon now presented DR. REEVE, PRESIDENT-ELECT, to the Society, who in a few well-chosen remarks returned thanks for the honor, and proceeded to read a paper entitled,

HISTORICAL AND CRITICAL NOTES ON THE MANAGEMENT OF THE THIRD STAGE OF LABOR.

Apologizing for occupying attention with a subject apparently so trivial, he found necessity for reconsidering it in recent practices. Papers had appeared in the journals within a year advocating removal of the placenta immediately after birth of the child, and at Strasburg they had lately been pursuing the plan of allowing it to remain until thrown off by the natural process. Both plans had been practised in the past, as shown by extracts from writers of the last century: both had been abandoned on account of disastrous consequences. The influence of delivery of the after-birth in causing inversion of the uterus was treated of at length, and the fact emphasized that uterine inversion as a spontaneous act of the organ itself, was not sufficiently recognized by the profession. If delivery of the placenta ever contributed to inversion of the uterus, as it certainly did, the now popular mode of expression known as Credé's method, was equally, if not more, liable to cause the accident than the vulgar midwife's plan of pulling at the cord. Dissatisfaction with Credé's method was shown by quotations from recent writers. Finally, no management of the third stage of labor could be scientific, which was limited to a single plan, and that did not, above all, take into consideration the character of the preceding stage of labor.

DR. W. J. CONKLIN, of Dayton, next presented a paper on

THE REMOTE EFFECTS OF CONGENITAL PHIMOSIS.

The author stated that ordinarily no bad consequences result from this deformity, but exceptionally it is the

initial factor in the causation of many grave local and constitutional disturbances. Disturbances of the genito-urinary organs are frequent sequelæ of a neglected phimosis. The irritable penis was considered to be a characteristic feature of a pathogenetic phimosis. Perhaps the most interesting portion of the paper was that which referred to the disorders of the nervous system which are occasionally associated with and dependent upon a neglected congenital phimosis. Cases of convulsions, incoördination of muscles, chorea, and paralysis were related, which had been promptly and permanently relieved by circumcision.

A case of chorea and total paraplegia, recently under the care of the writer, deserves a more extended notice. A boy of eleven years was afflicted with a fully developed but severe chorea, limited to the lower extremities. In a few days, the muscles of the face and arms were involved. Soon after, he became paraplegic. His penis was undeveloped, the prepuce elongated, and the preputial opening barely large enough to admit the smallest probe. Circumcision was advised and refused. For twelve weeks he did not walk a step or stand upon his feet. His parents, finally alarmed at his condition, consented to the operation. The chronic manifestations ceased immediately after the circumcision, and in forty-eight hours he walked without the slightest impairment of muscular power. The author strongly urged the necessity of closely examining the penis in all obscure nervous and bladder troubles in young children.

The next paper was by DR. N. P. DANDRIDGE, of Cincinnati, on

FOREIGN BODIES IN THE URETHRA.

The paper recited the histories of two cases in the writer's practice. In the second case, a bullet was extracted from the urethra, thirteen years after a gunshot wound in the groin. The patient came to the hospital complaining of a stricture. Exploration revealed a foreign body behind the peno-scrotal angle, which was removed by external incision, and proved to be the bullet. The statistics of gunshot wounds of the bladder, given by Bartels, and the cases found in the *Surgical History of the War*, were briefly analyzed. The treatment was thus summed up: An attempt should be made, in all cases, to extract the foreign body through the meatus. If not successful, and the body is in the deep urethra, it may be gently pushed into the bladder, provided it is not too hard for the lithotrite to crush. If stricture exists, a bougie should be passed, if possible, and allowed to remain for some hours, and often the stone will escape when it is withdrawn. If the introduction of the instrument is not possible, all strictures in the anterior portion of the canal should be cut by internal urethrotomy, but in the deeper part external urethrotomy alone should be practised. Finally, an incision is necessary when the above means fail, and should always be resorted to when the body has been impacted for a long time, for fear that ulceration of the urethral wall should occur, and lead to infiltration of urine.

DR. C. A. L. REED, of Hamilton, read a paper on

DISEASES OF THE FEMALE URETHRA.

The treatment recommended for follicular urethritis was division and subsequent cauterization of the urethro-follicular septum, thus practically obliterating the follicles of Skene, the seat of the disease. Several cases of granular urethritis were cited, and their treatment by the curette, or curette-forceps, and subsequent application of mild astringents advised. Urethritis depending upon adenomata and neuromata was treated by removal of the adventitious growths. The buttonhole operation of Emmet was successfully practised where the disease was due to prolapsus of the membrane. Kolpocystotomy was looked upon as the essential element of successful treatment in cases of simple urethritis of long standing, associated with infiltration and induration of the periurethral cellular tissue. The removal of this latter condition is best secured by copious intraurethral injections of hot water.

Dr. H. Z. Gill, of Cleveland, read an interesting report on *Restoring the Ruptured Perineum.*

DR. D. W. GREENE, of Dayton, presented a paper on

THE USE OF BOROGLYCERIDE IN THE TREATMENT OF SUPPURATIVE EYE AND EAR DISEASES.

The antiseptic properties of this new remedy were illustrated by its use in surgery and gynecology. The author from personal experience spoke favorably of its use in granular and catarrhal conjunctivitis, ophthalmia neonatorum, and ulcer of cornea.

He further endorsed it as a valuable remedy in suppurative inflammations of the middle ear. Nothing in the author's experience so promptly removed the fector of the discharges. A fifty per cent. solution in glycerine was the strength ordinarily advised.

After passing the usual complimentary resolutions to the officers, the Society adjourned to meet in Dayton on the first Wednesday of next June.

NEWS ITEMS.

BALTIMORE.

(From our Special Correspondent.)

THE ACTION OF CARBOLIC ACID, ATROPIA, AND CONVALLARIA ON THE HEART OF THE FROG AND TERRAPIN.—From some very interesting experiments with carbolic acid, atropia, and convallaria on the heart of the frog and terrapin, made at the Johns Hopkins University, DR. H. G. BEYER, U. S. N., has been able to draw some very important conclusions, of which we will here give a short summary:

I. *Carbolic acid* acts as a cardiac depressant from beginning to end, and is in no way a stimulant to the heart, as has been supposed by some. A steady stream of highly oxygenated blood being supplied to the heart, it takes a very considerably larger dose of the drug before its characteristic poisonous effects are produced than when only moderately oxygenated blood is used, apparently showing the great importance of keeping up the respiratory activity in cases of carbolic acid poisoning. Any effects produced by carbolic acid other than depressant are due to other causes, probably to primary stimulation of the respiratory centre in the medulla.

II. *Atropia.* So far as atropia is concerned, Dr. Beyer has added strong additional proof of the powerfully stimulant influence which is exerted by this drug over the action of the heart, which action, he thinks, has

hitherto not been sufficiently insisted upon, nor been so generally recognized as it deserved. This stimulant action is particularly well shown in one of the experiments in which the auricular portion of the heart was from the beginning in an atonic condition, and both auricles, therefore, remained almost completely passive, though distended with blood, while the ventricle was actively contracting. After atropinization both auricles commenced to work admirably, expanding fully and contracting completely; consequently the total amount of work done by the heart was double that which it was under normal blood. This experiment, in which the heart was kept under observation for seven hours and thirty-five minutes, includes nine atropinizations, each with the same result, namely, of inducing the passive and over-distended auricles to resume work in the most perfect manner, and thus increasing considerably the total amount of work done by the entire heart. Dr. Beyer has furthermore investigated the physiological antagonism supposed by Prof. Bartholow and Dr. A. C. Post, of N. Y., to exist between atropia and carbolic acid, and has found that, after the heart had been completely or almost completely paralyzed by carbolic acid, it resumed its normal activity in much less time, when allowed to recover under the influence of atropinized blood than under normal blood. This antagonistic action between these two drugs is more particularly well shown in the manometric tracings on the drum taken during the recovery of the heart under these two different conditions, so that the physiological antagonism between atropia and carbolic acid may be regarded as an established fact, so far as the heart is concerned.

III. *Convallaria.* From the large number of experiments with convallaria on the heart, Dr. Beyer formulates his conclusions somewhat as follows, viz.:

1. It increases its rate.
2. Slightly increases its work done.
3. Raises intracardiac and aortic pressure.
4. Arrests both auricles and ventricle in systole.
5. Large doses arrest the heart at once.
6. Produces its results most probably by its direct action on the muscular substance of the heart.
7. Has a very decided cumulative action, acting much slower than digitalis, and being much more persistent after the heart has once been brought under its influence.

From these conclusions, and from a close study of a number of clinical observations made by a great many observers, Dr. Beyer does not seem to take sides with those who deem the drug indicated in all kinds of cardiac disease without exception, as, for instance, Prof. Sée would have it, nor with those who would, on the other hand, have it condemned entirely. He thinks that we possess in convallaria a very powerful cardiac remedy, and that the uncertainty, lack of uniformity, and inconstancy in the results hitherto obtained by clinicians is mainly owing to the fact that the morbid conditions under which convallaria might be used with advantage or disadvantage are not yet thoroughly understood. From its decidedly destructive action on the muscular substance, Dr. Beyer concludes that it is certainly and decidedly counterindicated in very far advanced cases of cardiac disease of whatever nature, and also in cases in which the muscular substance of the heart has undergone degeneration or suffered any material structural change from long and exhausting disease. On account of the cumulative action of the drug, he recommends that only one or two full medicinal doses should be administered during the twenty-four hours, and that preference should be given to the administration of convallarimin rather than to any other of its preparations.

WASHINGTON.

(*From our Special Correspondent.*)

THE GARFIELD MEMORIAL HOSPITAL opens this week, June 18th, for the reception of patients. It is located on the corner of Boundary and Tenth Streets, in the extreme northern portion of the city. Dr. H. M. Cutts is resident physician.

PITTSBURG.

(*From our Special Correspondent.*)

PROFESSIONAL FEES IN PITTSBURG.—A little over a year ago, Dr. R. S. Sutton performed enterotomy on a lady of this city. He removed four inches of the small intestine, united the ends by suture, and left the intestine in the cavity of the abdomen. The lady recovered and is still living. Her husband was reported to be wealthy. Dr. Sutton charged a thousand dollars for the operation and twenty-two days' attendance. He refused to pay, and Dr. Sutton brought suit. The action closed before the jury on the 28th of April, and they returned a verdict for three hundred and thirty dollars for the services rendered. Some of the learned jury, we are informed, thought that ten dollars would be a fair price for the operation, and one of them thought that as he had once paid a doctor thirty dollars for an operation, that this sum would be about right. They each put down the amount they would allow, and divided the aggregate sum by twelve, and fixed that amount as the verdict.

HEIDELBERG.

(*From our Special Correspondent.*)

HEIDELBERG SURGERY.—The methods of surgery fluctuate with time, with the conceptions of the operator, and with new discoveries. The surgery at Heidelberg is, probably, typical, and represents the best methods of German surgery. It is conducted by Prof. Czerny, who was the assistant of Billroth, of Vienna, some dozen years ago. He operates and lectures at the same time for an hour and a half daily. He will operate some days for four or five hours.

Heidelberg and its surroundings produce an incredible number of patients. Club-foot, diseased joints, cancer, lupus, and tumors constitute the bulk of the surgery. He often operates for ovariotomy. In club-foot, he seldom performs tenotomy, but forcibly straightens the foot, and retains its position by means of a plaster-of-Paris bandage. Much plastic surgery is done, *e. g.*, covering erosion from lupus or epithelioma, or building a nose, by removing healthy integument from the forehead. The results are excellent, and sloughing is rare. Almost absolute cleanliness and disinfection are the remarkable features of the clinic. The German who exclaimed at the International Congress, "Mein Gott, Listerism is todt," did not strike the truth. Disinfection is practised in every department in detail, *e. g.*, in the resection of the elbow-joint, the part is well soaped and

shaved, and washed with a one to three per cent. carbolic solution; then, Prof. Czerny, with well-disinfected hands and instruments, cuts down on each condyle of the humerus, removes the dead bone, washes out the wound with bichloride of mercury solution (1–2 to 1000), and sews it up; then he introduces some bone drainage-tubes, packed round with gauze holding powdered iodoform; this is put up in bags of wood-wool, disinfected with carbolic or bichloride solution; the whole is then bound with disinfected bandages. The joint is then put to rest, and not disturbed for ten days, unless pain, bleeding, or fever indicates it. Infrequent dressing is a strong feature of his clinic. In major operations—ovariotomy, large joint-openings, etc., he uses the spray. The therapeutic measures employed are, essentially, cleanliness, carbolic acid and bichloride disinfecting solutions, quinine in large doses, and the liberal use of powdered iodoform. His results are naturally very good, as he attends religiously to the minute details of all neatness.

Prof. Czerny is a man about forty-five years of age, with dark hair and broad shoulders. He has an energetic twinkle in his eyes, and is genial and good-humored. He is a demonstrative instructor, a man who talks to the point, and an original operator. His fame rests mainly on successful and original abdominal surgery. He is very kind and instructive to foreign doctors, and speaks good English.

THE INTERNATIONAL MEDICAL CONGRESS. — The Organizing Committee of the International Medical Congress, to be held at Copenhagen, August 10th to 16th, have just issued a pamphlet containing the rules and programme.

The Congress will be held under the patronage of H. M. the King of Denmark. Prof. P. L. Panum is President and Prof. C. Lange Secretary-General of the Organizing Committee.

The Congress will be formally opened on Sunday, August 10th, and will end on Saturday, August 16th. The work of the Congress will be divided into fourteen Sections, which will meet daily, from 10 A. M. to 12 M., and from 1 P. M. to 3 P. M. The general meetings of the Congress will be held daily, from 4 P. M. to 5.30 P. M. The official languages of the Congress are French, German, and English.

The following addresses will be delivered in the general meetings: On Metaplasia, by Prof. Virchow, of Berlin. On Morbific Microörganisms and Vaccinia Matters, by Prof. Pasteur, of Paris. International Collective Investigation of Disease, by Sir William Gull, Bart., of London. The Natural Production of Malaria and the Means for Making the Malarial Countries more Healthy, by Prof. Tommasi Crudeli, of Rome. The Neoplastic Diathesis, by Prof. Verneuil, of Paris. On Investigations of Food Rations for Men in Health and Disease, especially in Hospitals, Infirmaries, and Prisons, by Prof. Panum, of Copenhagen.

The Sections are as follows: 1, Anatomy; 2, Physiology; 3, Pathology; 4, Medicine; 5, Surgery; 6, Obstetrics and Gynecology; 7, Ophthalmology; 8, Pediatrics; 9, Dermatology and Syphilis; 10, Psychiatry and Nervous Diseases; 11, Laryngology; 12, Otology; 13, State Medicine; 14, Military Medicine.

Among the more important papers to be read we notice the following:

On the Morphological and Physiological Variability of Pathogenic Bacteria, by Dr. R. Koch, of Berlin. On a Uniform Nomenclature of Auscultatory Sounds in the Diagnosis of Diseases of the Chest, by Prof. Austin Flint, of New York. On the Antipyretic Treatment of Acute Infectious Diseases, by Prof. Liebermeister, of Tübingen. On the Antiseptic Treatment of Acute Infectious Diseases, by Prof. Bouchard, of Paris. The Etiology, Diagnosis, Prognosis, and Treatment of Tuberculosis, as Influenced by Recent Experiences in Pathological Anatomy and Experimental Pathology, by Prof. Ewald, of Berlin. Operative Opening of Pulmonary Cavities, by Dr. Edw. Bull, of Christiana. Is Acute Pneumonia an Infectious Disease? by Prof. Jürgensen, of Tübingen. The Most Important Methods of Antiseptic Treatment of Wounds, by Prof. Lister, of London; Prof. Mosetig-Moorhof, of Vienna; M. Schede, of Hamburg; Prof. Paul Bert, of Paris; Prof. Esmarch, of Kiel. Resection of the Stomach and Intestinal Tube, by Prof. Gussenbauer, of Prague. Trephining in Localized Diseases of the Brain, by Dr. Lucas-Championnière, of Paris; Prof. Ferrier, of London; and Prof. Mollière, of Lyons. The Treatment of Strictures of the Œsophagus, by Prof. Studsgaard, of Copenhagen. Antiseptics in Laparotomy, by Prof. Mikulicz, of Cracow. Oöphorectomy as a Remedy Against Nervous and Mental Sufferings, by Prof. Hegar, of Freiburg. Vaginal Excision of the Cancerous Uterus, by Prof. Schroeder, of Berlin. On the Operative Treatment of Extrauterine Pregnancy, by Prof. Litzmann, of Kiel. Cæsarean Section and its Modifications, by Prof. P. Müller, of Berne. The Treatment of Syphilis with Mercurial Injections, by Dr. Liebreich, of Berlin; Prof. Lewin, of Berlin; Prof. Neumann, of Vienna; and Dr. Martineau, of Paris. The Prognostic Significance of the Severe Local Manifestations Observed in Tuberculosis of the Larynx, by Dr. Solis-Cohen, of Philadelphia. Treatment of Goitre, by Dr. Morell Mackenzie, of London. The Operative Removal of Foreign Bodies and Pseudoplasms from the Air-passages, by Prof. Voltolini, of Breslau, and Dr. Geo. M. Lefferts, of New York. The Singing Voice: *a*. Its Proper Method of Training, by Dr. F. H. Bosworth, of New York; *b*. Its Cultivation Facilitated by Photography of the Larynx, by Dr. Lennox Browne, of London. The Antiseptic Treatment of Wounds in Time of War, with Particular Regard to the Employment of Safe, Efficacious, and Simple Requisites, as to Adapt them Particularly for Military Surgery, by Prof. Esmarch, of Kiel; Sir Wm. MacCormac, of London; Dr. Neudörfer, of Vienna; and Dr. Strube, of Berlin.

THE SAMUEL D. GROSS PROFESSORSHIP OF PATHOLOGICAL ANATOMY.—At a meeting of the medical profession of Philadelphia, held June 9, Drs. D. Hayes Agnew, Samuel Ashhurst, W. B. Atkinson, Roberts Bartholow, J. M. Barton, J. Solis-Cohen, J. M. Da Costa, R. J. Dunglison, Nathan L. Hatfield, I. Minis Hays, P. J. Horwitz, Wm. Hunt, Joseph Leidy, R. J. Levis, J. Ewing Mears, S. Weir Mitchell, G. R. Morehouse, Andrew Nebinger, M. B. Musser, Theophilus Parvin, W. H. Parish, Wm. Pepper, Wm. Thomson, Laurence Turnbull, W. S. W. Ruschenberger, H. H. Smith, Alfred

Stillé, Wm. H. Walker, and James C. Wilson, were appointed a committee to issue the following appeal:

"American surgery has had no better exponent than Samuel D. Gross, none so honored abroad and at home by institutions of learning, none more revered by his associates and his pupils.

"His long and brilliant professorial career deserves the perpetuation of his name in close association with medical tuition.

"In furtherance of this object the Alumni Association of Jefferson Medical College has inaugurated a movement to secure in some medical school the endowment of a *memorial professorship*, to be designated 'THE S. D. GROSS PROFESSORSHIP OF PATHOLOGICAL ANATOMY.'

"The profession at large, the personal friends of the late Professor Gross, and others interested in the advancement of medical education, are cordially invited to participate in this graceful recognition of conduct and services which have largely helped to establish the high standard of excellence to which surgery has attained throughout the United States, and to dignify the repute of American medicine."

Contributions may be sent to Dr. R. J. Dunglison, Lock-box 1274, P. O. Philadelphia, and will be acknowledged in the columns of THE MEDICAL NEWS.

D. Hayes Agnew, M.D., Chairman.

THE ILLINOIS MEDICAL PRACTICE ACT.—Recent decisions in two cases, one under the Act to Regulate the Practice of Medicine in Illinois, the other under the Dental Surgery Act, sustain the right of the Board of Health to determine the status both of a college and of a practitioner. Under the latter Act, the Supreme Court refused the petition of Isaac N. Sheppard for a writ of mandamus to compel the State Board of Dental Examiners to issue him a certificate or license, based upon a diploma of the Indiana Dental College. The Board refused the license, on the ground that the college was not a "reputable" institution.

It was argued that the law constitutes the Board judges of the standing of a college, and that there is no power of review vested in any other body. "If the Board should arbitrarily or unreasonably abuse their discretion, and refuse a license without any reason therefor, there is a remedy for such abuse of a discretionary power." But there was no ground for claiming that this was the case in the present instance. The Board, in its judgment, had decided that the curriculum of study and the requirements for graduation of the Indiana Dental College were not such as to entitle it to be classed as a "reputable dental college;" and there is no power in the law given to any person or body to review and set aside, or confirm the exercise of the discretion by the Board. The petition for a mandamus was denied.

In the case of the State Board of Health against C. Buel Rice, of Cincinnati, a graduate of the Medical College of Fort Wayne, tried in the Sangamon County Court, the defence set up the plea that, being a graduate of a "legally chartered medical society in good standing," the defendant was entitled to the certificate of the Board; and that it was not competent for the Board to inquire into the moral or professional character of such graduates. On the part of the prosecution it was shown that charges had been presented to the Board, alleging that Rice was in the employ of, and associated with, the "K. and K. Surgeons," a firm of advertising quacks, and that in various ways connected therewith his conduct was unprofessional and dishonorable, within the meaning and intent of the Medical Practice Act. Upon these charges the Board had refused to issue Rice a certificate until he had disproved the same. Instead of making any attempt at such disproof, Rice continued to practise, whereupon he was arrested for practising without the necessary certificate. The facts were admitted by the defence, but, as already stated, the court was asked to dismiss the suit on the ground that it was obligatory on the Board to issue its certificate to the possessor of a genuine diploma of any "legally chartered medical institution in good standing," regardless of the moral or professional status of the individual. This the court declined to do, but found the defendant guilty, and assessed a penalty of fifty dollars fine, and costs.

MEDICAL COLLEGE OF OHIO.—The Faculty of the Medical College of Ohio has decided to hold a preliminary examination of all candidates for admission to the lecture classes, in the absence of a diploma or other evidence of sufficient literary training. A chair of hygiene has also been added.

YELLOW FEVER VACCINATIONS.—DR. DOMINGO FREIRE, of Rio Janeiro, the discoverer of the so-called microbe of yellow fever, writes to the New York *Evening Telegram*. "I still continue the vaccinations: four hundred and six persons have been already inoculated without the slightest disadvantage. Yellow fever is now raging here in Rio. As soon as it is over I will write, giving the results respecting those vaccinated. For the present I can only say that the exemption is confirmed. In about two months I hope to be able to publish a full report of all my researches in regard to yellow fever."

MR. LAWSON TAIT, we are informed, intends visiting this country during this summer. He will sail for New York on August 9th, and on August 25th, he will deliver an address on Abdominal Surgery, before the Canada Medical Association at its meeting in Montreal.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 10 TO JUNE 16, 1884.

MIDDLETON, PASSMORE, *Captain and Assistant Surgeon.*—Leave of absence extended three months on surgeon's certificate of disability.—*Par. 3, S. O. 134, A. G. O.*, June 10, 1884.

BARNETT, RICHARDS, *Captain and Assistant Surgeon.*—Assigned to duty as Post Surgeon, Mount Vernon Barracks, Ala.—*Par. 2, S. O. 113, Headquarters Department of the East*, June 9, 1884.

GARDNER, EDWIN F., *Captain and Assistant Surgeon.*—Relieved from duty at Fort Walla Walla, Washington Territory, and assigned to duty as Post Surgeon, Fort Canby, Washington Territory.—*Par. 1, S. O. 75, Headquarters Department of Columbia*, June 3, 1884.

PORTER, J. Y., *Captain and Assistant Surgeon.*—From Fort Ringgold, Texas, to Fort Brown, Texas, as Post Surgeon.—*S. O. 73, Headquarters Department of Texas*, June 9, 1884.

MADDOX, T. J. C., *First Lieutenant and Assistant Surgeon.*—From Fort Clark, Texas, to Fort Ringgold, Texas, as Post Surgeon.—*S. O. 73, Headquarters Department of Texas*, June 9, 1884.

BLACK, C. S. *First Lieutenant and Assistant Surgeon.*—From Fort Concho, Texas, to Fort Clark, Texas.—*S. O. 73, Headquarters Department of Texas*, June 9, 1884.

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ORIGINAL LECTURES.

A CASE OF SUPPOSED PROGRESSIVE PERNICIOUS ANÆMIA.

An Abstract of a Clinical Lecture delivered in the Philadelphia Hospital.

BY EDWARD T. BRUEN, M.D.,

DEMONSTRATOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF PENNSYLVANIA.

GENTLEMEN: The history of this case is as follows: Mary L., æt. 47, has been from her youth subject to irregular menstruation and menorrhagia, and yet until three years ago she never suffered from any marked attack of illness. At that time she was admitted to the Episcopal Hospital to be treated for a metrorrhagia, and she partially recovered after six months' treatment. Her health, however, continued to decline, and a year ago she had presumably an attack of malarial fever, from which she convalesced, but her general health failing, she was admitted to this hospital during last fall. It is proper to add that she has led a fast life, and a specific taint may be suspected, though it cannot be established. Her condition has not materially changed since her admission, and with these data I commenced the investigation of her case February 1st, when I assumed the care of the wards. It is obvious that intense anæmia is present. The tongue, the mucous membrane, and the skin, all present an extremely blanched appearance, the latter is also of a yellowish hue. Digestion is impaired, and the motions of the bowels irregular. Physical diagnosis reveals that the splenic dulness is increased, the spleen measuring four inches transversely, by five in the vertical direction. Over the heart there is a bruit which, upon the usual inferential reasons, is probably functional or hæmic. The examination of the retina is negative. A diagnosis in this case can be most certainly reached by exclusion. The enlarged spleen, the blanched appearance of the patient, and the progressive character of the symptoms suggest leucocythæmia, but since the disease has existed for three years, the possibility of an incipient splenic leucocythæmia antedating a leucocytal excess, cannot be entertained. In leucocythæmia enumeration by the hæmacytometer should show not only the white corpuscles increased, but the red corpuscles diminished. Usually when the disease is established the proportion of white to red is greater than 1 to 20. For example, instead of 500,000 red corpuscles per cubic millimetre, there may be only half so many or less; and the white may be increased from 15,000, the normal average, up to several hundred thousand per cubic millimetre. The red corpuscles are usually normal in appearance, sometimes unduly pale; the leucocytes are often both larger and smaller than normal, and reagents develop several nuclei. No such increase has been found in this case, consequently further investigation must be made.

Hodgkin's disease is a process which may be defined as a more or less widely spread enlargement of the lymphatic glands, accompanied frequently by enlargement of the spleen and by progressive anæmia. The pathological feature of this process, viz., the lymphatic hyperplasia, is absent, so this disease must be laid aside.

The question of progressive pernicious anæmia in this case has been one of deep interest to me, and is my reason for bringing the case before you. The pathology of this disease is obscure, lesions in the medullæ of the bones, the spleen, and the supra-renal capsules, have been described, but its course is indicated by the terms pernicious, malignant, progressive, idiopathic.

The blood lesion in this case has been studied for me by Dr. Wm. E. Hughes, Medical Registrar of the University Hospital, with the hæmacytometer with the following report: "600,000 red and 3000 white corpuscles to the cubic millimetre. That is, the red are reduced to about one-ninth of their normal number, while the white are very slightly decreased, less than one-half. The red corpuscles are, most of them, larger than normal, some as large as white corpuscles; a few of them are very small. They are well colored, but some are tailed and otherwise irregularly shaped. The white are probably a trifle increased in size." This appearance of the blood is believed to accord with the lesions of this tissue in pernicious anæmia. In an idiopathic anæmia the appearance of the red corpuscles would not be so ill-shaped; they would be paler than normal, and also smaller. The exact changes of the blood in what may be termed symptomatic anæmia, such as in malaria, syphilis, tuberculosis, or albumenoid disease, etc., cannot be said to be positively established. Dr. Hughes, in his note, observes that in his experience in malarial anæmia the number of red cells is above 1,500,000, and the white not less than 50,000. Syphilitic anæmia would present the same characteristics as malarial anæmia with respect to red cells, but the white would be about 5000 in the cubic millimetre. Dr. Hughes has examined the blood from a large number of cases, and his observations are entitled to attention.

I believe, however, that deductions from physical signs should be made only after an analysis of the sum of the clinical history and the symptoms. The malarial element must be excluded from this case because the attack occurred only a year since, and the symptoms of this patient antedate this time. The syphilitic hypothesis is also insufficient because there are not distinct evidences of syphilitic lesions in the past or present history of the case. The circumstance that this patient always suffered from irregular menstruation and hemorrhages at the monthly periods, is of consequence, and it seems to me that she may suffer from a form of anæmia allied to the chlorotic. In other words, the depreciation of the patient's nervous vitality united to the history of menorrhagia has exercised a specially depreciating influence upon the blood-making function, which has resulted in a reduced elaboration of the corpuscular elements of the blood. It is, however, possible that the malaria has acted as an accelerating causative

complication, and perhaps this attack of malaria may account for the enlargement of the spleen.

With the above views, viz.: that in this case the excessive blood destruction depends upon insufficient activity of the blood-making functions in the economy, the line of treatment should be purely alterative and stimulant to the nutritive functions, and also tend to supply the essential elements of nutrition.

As an alterative, I believe no remedy will prove more signally useful than the continued use of mercury in some form. Small doses of bichloride of mercury, ranging between the $\frac{1}{50}$th and the $\frac{1}{100}$th of a grain, so that without salivation the stimulant influence of this drug as an alterative tonic may be kept up. Small doses of calomel, $\frac{1}{50}$th to $\frac{1}{100}$th of a grain, are sometimes equally useful. This treatment must be maintained for many weeks, or even months, but after a six weeks' course of the mercurial, iron, which previously may not have produced any good effect, can be used with advantage. While using the mercurial I shall order small doses of Fowler's solution at meal-time, and the mercurial in the intervals, three times daily. Occasional laxatives or digestive stimulants, such as strychnine or pepsine, form suitable adjuvants to this plan of treatment. To supply the essential elements of nutrition I shall order a liniment, composed as follows:

℞.—Lin. Saponis,
Ol. Morrhuæ, ... āā ℥vi.—M.

A tablespoonful or more shall be rubbed into the thighs and abdomen night and morning.

Much careful thought should be bestowed on diet. I shall recommend the Gluten Food, prepared by the American Health Food Company, and Murdock's Liquid Beef, as especially useful.

NOTE (March 28, 1884).—At this date the patient's health is obviously improved. There is a tinge of red around the lips and tongue, and the strength is increased. Dr. Hughes reports that the examination of the blood showed 1,305,000 red corpuscles, which is a very decided improvement on the condition when first examined. The size and shape of the corpuscles, however, are very little changed, most of them being larger than normal, and many of them still irregularly shaped.

ORIGINAL ARTICLES.

REMOVAL OF FOREIGN BODIES FROM THE AUDITORY CANAL.

BY H. B. HEMENWAY, A.M., M.D.,
OF KALAMAZOO, MICH.

ABOUT four years ago, one Monday morning, I met an old acquaintance and successful surgeon at the depot of a small village in Illinois. He asked me if I could meet him that morning, to assist him in a small, but bothersome, case. He gave me the following history. I made no records of the case, except in my mind, and, hence, must relate the events from memory.

The evening before (Sunday), Mrs. T., the wife of a lake captain, brought her little boy, about five years old, to the office of Dr. B., to have him remove "something from his ear." She said he had been playing that afternoon with the other children. In his play, he got à "lemon-stone" into his ear, and could not get it out. It gave him but little pain, but affected his hearing. Upon examination, the doctor could easily see the stone, not very far back, probably at the most contracted portion of the canal. He placed the child's head on one side, and tried to dislodge the stone by jarring. It did not come. He still regarded it as a simple case, and took his forceps; but, in trying to get hold of the stone, he pushed it further in. Then, though several times he seemed to have a good hold, the stone would always slip from his grasp just as he thought it was coming out. He tried the use of wire and silk snares, but with the same result. He tried to hold it by tenacula, but could not. He worked until his patience was about used up, if his patient was not, and the ear was in a worse condition than when he began. He then told the mother to take the boy home, and he would come around the next morning, and give him chloroform. He explained that he could see better in the daytime, and that the pain in the ear was so great that the little fellow would resist his efforts, unless he should be under the influence of an anæsthetic.

Meanwhile, the doctor endeavored to invent some new method to try. He searched his books for some suggestion, but to no purpose. After his relation of the above history, remembering a hint which my old professor of anatomy, Dr. R. L. Rea, had given us as to the shape of the auditory canal, I asked the doctor if he had tried an ear-spoon. He replied "no;" he had none, and if he had, he could not see how that would help the matter very much. I explained the *rationale*, and offered the spoon from my pocket-case.

We found the patient in a very good condition. There was considerable inflammatory action, and, hence, sensitiveness and pain in the auditory canal. With the spoon, we could feel the stone, and found it now impacted, the swelling of the tissues helping to keep it firmly in place. Equal parts of chloroform and ether were given. After working some time, without making any progress, the doctor was about ready to give up the attempt, when I managed to turn the stone over. Slowly, but surely, we then drew it along the canal. My ear-spoon is of the common style—ear-spoon and groove-director combined. After the stone was turned, our chief trouble lay not so much in the slipping of the spoon from the stone, as in the fact that we could not get a firm enough hold on the spoon with our fingers. We need a cross-bar or loops for the fingers on the handle. When, finally, we brought the stone to the concha, we found that it was not a lemon-seed, but a cherry-stone.

I have given the history of this case thus fully, for it well illustrates how much trouble one may have with a very simple matter. With an ear-spoon in the first place, Dr. B. could easily have removed the stone in a few minutes, but, after the swelling took place, it was very difficult.

What is the *rationale* of the removal of foreign bodies from the auditory canal? The canal extends from the concha, inwards, forwards, and downwards,

being slightly bent, the convexity of the curve being upwards and backwards. The canal has its smallest diameter near its centre. A cross-section of the canal shows it to be ovoidal in shape, the longest diameter being vertical, except at the inner end, where it is nearly horizontal. The foreign body is likely to lodge in the contracted portion of the canal. The use of forceps (which, with a general practitioner, is the first instrument tried in such cases) is almost sure to push the body back beyond the constriction, and thereby increase the difficulty. If used at all, the operator must remember that there is more room above and below than at the side of the foreign body. An ear-spoon, however, can almost always be passed *over* the body far enough to get a good hold. The spoon is so shaped that it takes very little more room than the foreign body, when applied like the blade of the obstetric forceps. When the body lies against the membrana tympani, remember that there is more room in front, or behind, than above the body. It is better to pass the spoon behind the body; for, if passed in front, the pressure upon the body would tend to push it through the membrana tympani. On account of the shape of the canal, too, the foreign body is more likely to lie against the anterior than the posterior wall of the canal. Inasmuch as the surgeon will want his instrument above the foreign body, when it nears the contracted portion of the passage, it will generally be best to pass it neither directly over, nor exactly behind, but above and behind the object to be removed. In this position, on account of the relation of the parts, the tip of the spoon will simply be passed along the wall of the canal and the membrana tympani, until in position for traction. In the case related above, the instrument was easily passed into position, and but for the partly macerated and badly swollen condition of the parts, extraction would not have been very difficult. It was the most difficult case of the kind I have ever seen, and well illustrates the fact that a surgeon had better leave a case entirely alone, unless he is fully prepared to treat it.

Other modes of extraction. Forceps may do very well for many cases, but in those in which the doctor is the most perplexed, they generally avail but little. Of course, the foreign-body forceps of the aural surgeon are to be preferred to any other form; but few general practitioners possess such an instrument, and even if they did, in many cases it would be found useless. A snare oftentimes may be of great assistance; but it is very difficult to make it stay on a hard, smooth, round body like a cherry-stone. The syringe will frequently remove objects that have not passed the constricted portion, and may assist in the removal of small objects from the vicinity of the membrana. When used upon a large object that is located beyond the constriction, and which nearly fills the canal, it only macerates the tissues.

While in other modes of manipulation, the position of the head is important, it is especially so in the use of the syringe. With the head of the patient thrown a little back and toward the affected side, if the operator, pulling the pinna auris upward, and a little backward, throws a *gentle, steady* stream of *lukewarm* water along the superior wall of the canal, the momentum of the current reflected from the membrana tympani against the mass, together with the action of gravity, will quickly accomplish the desired result, if this method will succeed at all. Much force must not be used.

A little hot wax or glue on the end of a stick has been recommended, if the body has not passed the constriction. It seems to me that this is to be condemned as being less efficient and more dangerous than any of the other methods. In some cases, the foreign body may be dissected and removed in pieces. If, however, the object is as hard as a cherry-stone, it would probably be less harmful to leave it in than to attempt to break it. In a few cases, a tenaculum may be used, but care must be taken that harm be not done by its slipping.

SEROUS CYSTIC TUMORS OF THE ORBIT.[1]

BY L. WEBSTER FOX, M.D.,
OPHTHALMIC AND AURAL SURGEON TO THE GERMANTOWN HOSPITAL; CLINICAL ASSISTANT, EYE DEPARTMENT, JEFFERSON MEDICAL COLLEGE HOSPITAL.

IN vol. xii. No. 2, *Archives of Ophthalmology*, Dr. J. L. Thompson described one case of cystic tumor of the orbit, removed by electrolysis. I wish to place on record four cases treated by a different method, resulting in permanent relief.

CASE I.—W. M., aged eighteen years, consulted me relative to a small growth projecting from the left upper eyelid, situated below the orbital ridge to the nasal side. Vision, both eyes $= \frac{20}{L}$; refraction myopic. No lesion in fundus oculi. Mobility of eye not interfered with. The elevation was round, glistening, and translucent; the skin over it quite thin, somewhat tense; it had attained the size of an almond. As its contour could be changed by manipulation, I suspected a sac filled with fluid, which was confirmed by making an examination with an exploring needle. The fluid escaping was clear yellowish, of about the consistency of honey. The tumor was detected when the patient was five years of age.

CASE II.—Miss B., aged fifteen years, a well-developed girl, was brought to me in October, 1881, by her mother, with the following history: When the patient was six years old the mother detected a small, soft growth, about the size of a pea, under the skin of the right upper eyelid, nasal side. The family physician was consulted. He advised non-surgical interference at this time. The tumor has slowly increased in size; barely discernible to an observer's eye, but distinctly felt by fingers. There has been no pain. The exploring needle revealed fluid. No lesion in fundus oculi. Vision, both eyes $= \frac{20}{XX}$. Family history irrelevant.

CASE III.—James C., aged twenty-four years. At the age of ten years, a small tumor was noticed below the nasal end of the eyebrow, about the size of a bean. The patient was seen by me, for the first

[1] Read before the Philadelphia Ophthalmic and Aural Book Club Association, February 18, 1884.

time, in April, 1882. The tumor at this time was about the size of a shellbark, buried in the tissues of the orbit, displacing slightly the inner third of the ciliary margin of the upper eyelid, but not interfering with the movements of the eyeball—hence no diplopia. In October, 1881, the tumor was opened by a surgeon, nothing escaping but an oily fluid. The tumor collapsed; the wound was dressed and healed rapidly. In about two months the cyst had regained its former size and remained so till the patient presented himself to me. The exploring needle proved the presence of fluid. Vision, both eyes $= \frac{20}{XX}$. No lesion in fundus oculi.

CASE IV.—On April 23, 1883, my friends Drs. Miller and Wirgman asked me to examine with them a case with the following history and conditions. H. G. B., aged twenty-six years, a patient of Dr. Miller. At the age of three years, a small tumor, about the size of a split-pea, was detected below the orbital ridge on the nasal side, buried in the tissues of the right upper eyelid. The tumor was of slow growth, for at the time of the operation, twenty-thsee years after its discovery, it had only attained the size of an almond. The tumor, upon digital examination, fluctuated; an exploring needle proved the presence of fluid; no lesion in fundus oculi, and the vision in both eyes was normal. The patient suffered no pain nor inconvenience. The tumor was removed by Dr. Wirgman to relieve the patient from the apprehension that a serious trouble might develop.

Dr. Miller recently informed me that the operation has been successful, as there is no evidence of the cyst returning.

The external appearances of the tumors were strikingly similar. The integument covering had a glistening, pink color, slightly translucent, moderately tense, and not adherent to the tumor. The sizes of the cysts vary; they are not pointed, but oval, in shape, having their greatest breadth immediately below the skin, while the small or pointed diameter lies buried deep in the orbit. Their point of development, apparently, is from the periosteum covering the nasal bone, finding their way to the surface, expanding where there is least constriction from the tissues, are of exceedingly slow growth, never interfering with the mobility of the eyeball nor movements of eyelid. These cysts are detected in early life, and, no doubt, like the dermoid, are developed in the embryonic period. The cyst-walls, which are thin, fibrinous, and elastic, cannot be easily dissected from the adjoining tissues.

The fluid contents of the sac are clear-yellowish, and of the consistency of honey. Microscopic examination revealed an oily fluid filled with fatty, granular masses, large oval cells, similar to mucous cells; no cholesterine crystals, or dermoid *débris*.

Treatment.—The application of irritants externally, puncturing the cyst, injecting dilute tincture of iodine, signally fail to give permanent relief. An incision of not less than six lines was made with a sharp-pointed bistoury, or Beer's knife, into the sac, making the wound in the horizontal direction, and the contents of the tumor emptied by gentle pressure. A point of nitrate of silver was then thoroughly applied to the inner walls of the cyst (great care must be observed to apply the caustic to the lower part of the cavity); by this procedure the inner walls are destroyed, thereby creating two inflamed surfaces which become agglutinated, and the cyst is obliterated. A small pellet of lint is usually kept in the external orifice of the wound for three or four days, to prevent closure, as the destroyed tissues will slough, and a slight discharge make its appearance. For the first six hours after the operation cold dressings are applied; after this, boroglyceride. There is no reaction, the cavity healing rapidly.

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MEDICAL PROGRESS.

CORROSIVE SUBLIMATE AND IODOFORM IN THE PUERPERAL STATE.—Valuable information is obtainable from the report of the discussion (in the Fifty-sixth Congress of German Physicians and Naturalists) on Kehrer's paper on "Sublimate Injections" (*Archiv für Gynäkol.*, Bd. xxii., Heft 1). Mercuric chloride is shown to be odorless, and cheaper and more soluble than carbolic acid. Küstner, who obtained the uterine secretions by means of tubes direct from the interior of the womb, discovered that the micrococci, which normally abound in them, disappeared promptly after sublimate injections, but only slowly after carbolized injections. Bardeleben's experiments seem to show that a solution of 1 in 10,000 is sufficiently energetic. Ehrendorfer contributes an important paper, "Ueber die Verwendung der Iodoformstäbchen." He recommends iodoform pencils containing ninety to one hundred and fifty grains of pulverized iodoform, and fifteen grains each of gum-arabic, glycerine, and pure starch, which are easily soluble and flexible; they are thus readily introduced into the uterine cavity, after the genital tract has been irrigated with an antiseptic lotion. The iodoform was only used as an intrauterine pencil in labors which were abnormal, or which were followed by purulent endometritis, etc. He reports in detail twenty-nine cases, nearly all severe, in several of which the patient's condition was rendered desperate by the existence of gangrene, erysipelas, and other serious complications. König has shown that iodoform intoxication is rare when not more than ten grammes (about one hundred and fifty grains) of pure iodoform are applied.—*Medical Times and Gazette*, May 31, 1884.

ACTION OF PAPAYOTIN.—ROSSBACH, in the course of recent studies on this subject, finds that the juice of papaya, and papayotin and papain, can be given internally, by direct intravenous injection and by hypodermatic injection. He also finds that the drug may be used in cutaneous eruptions, for cancerous nodules of the skin, for the removal of diphtheritic membranes, to assist meat-digestion in the stomach and intestines, in dyspepsia and other diseases of the digestive organs, in cancer of the stomach, and for intestinal worms, which papayotin should kill.—*Deutsche med. Wochenschrift*, April 3, 1884.

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SATURDAY, JUNE 28, 1884.

INTERMITTENT CHYLURIA.

AN interesting discussion, which took place at the Berlin Medical Society, on this still obscure subject, is published in the *Berliner klin. Wochenschr.* for March 10. PROF. SIGMUND reported an example which elicited the views of VIRCHOW, SENATOR, EWALD, and LITTEN.

The case was that of a German who, excepting a year spent in France during the recent war, had never been out of the fatherland. At the siege of Paris, he had dysentery for two weeks. At the beginning of 1883, he became weak and restless, sweated profusely, and complained of rheumatic pains in the back and thighs, and in the lower part of the abdomen and testicles. His urine was albuminous, and remained turbid after the albumen was separated. The turbidity was found to be due to molecular fat, of which there was 1.038 per cent. present. A power of 900 diameters revealed neither animal nor vegetable organism in the fresh urine. This fatty urine alternated with perfectly normal fluid, quite free from albumen and fat, the longest time during which the urine was free from chyle being seventy-two hours. It was present on an average once in every twenty-four hours, and appeared most frequently between 2.15 and 7.45 A.M. The condition gradually improved, but had not disappeared altogether.

As to the cause of the chyluria, Sigmund thought it could not be due to any disease of the kidneys, or that these organs could even play an intermediate *rôle*. He thought rather that a mechanical defect existed, as the result of which the two streams of urine and chyle commingled somewhere between the pelvis of the kidney and the beginning of the urethra. This view is confirmed by a case reported by Havelburg, and is accepted also by Hoppe-Seyler. It explains the sudden occurrence, but not the intermission in the case reported, for this was found quite independent of the recumbent position, whether in natural sleep at night, or that during the day induced by chloral. While admitting that the cause of the disease had not yet been ascertained, he thought that chyluria, as it prevailed in the tropics and in temperate climes, are not one and the same thing.

Senator had recently met with a case of chyluria, also intermittent, in which a study of the blood by day and at night discovered no parasite, nor did the blood exhibit a fatty character, while it contained, in addition to albumen, hemialbumose, but no peptone, which had been found by Brieger and others, and no sugar. He thought, however, that in his case the phenomenon was influenced by rest and action.

Ewald thought the intermittent occurrence might be explained by the existence of a valvular fistula, which would be kept closed by a sufficient intralymphatic pressure, but which became patulous when such pressure was diminished.

Litten had observed intermittent chyluria in a case of intermittent fever, but had been unable to establish any relation between the chyluria and the pyrexia or apyrexia. The patient averred that he had had both conditions for a long time.

Virchow thought that the fact that the phenomenon appeared in the morning was in direct opposition to the explanation of Ewald and that it was difficult to follow the path the chyle must pursue in reaching the bladder. If the condition is one primary to the lymph vessels, the current must travel backwards, which is contrary to all experience — the absorbed chyle travelling toward the root of the mesentery and receptaculum chyli. On the other hand, the absence of sugar is the more remarkable, since in the analogous phenomenon—elephantiasis lymphorrhagica—sugar is present. One cannot but believe that in the latter condition the chyle passes through the blood to the periphery, and from the blood is passed into the lymph vessels; in a word, that a chylous state of the blood must precede the separation of the chyle. The case is different with chylous ascites. Here we must have an overdistention of the chyle vessels of the intestine and their rupture into the peritoneal sac. In the neighborhood of the pancreas, we also often have an ectasy of the lymph vessels, with colossal cyst formation. Prof. Virchow thought that further observations should be made, and especially that the blood should be examined at different times, with a view to determining the quantity of fat therein.

Senator considered that the experiments of Brieger, by which it was shown that the liberal ingestion of

fat by the patient produced no change in the urine, and especially none in its quantity, were opposed to the view of Ewald.

Ewald thought he had been misunderstood by both Virchow and Senator. He did not claim that the appearance of the chyle in the urine was the result of an increase of chyle in the chyle vessels after digestion, but rather to the opposite condition, such as occurs during fasting, whereby a fistulous communication between the lymph vessels and urinary passages is opened, which is closed by a distended state of these same vessels, just as in certain cases of pneumothorax the opening in the lungs is closed if the pressure within the chest is great, while it is open if the pressure diminishes.

It is scarcely likely that four men could have been found better qualified to explain the phenomena of chyluria, especially as it occurs in temperate climes, than those whose views have just been presented. Yet it is evident that nothing definite was added to our knowledge, although ingenious hypotheses were suggested.

It is almost certain that Sigmund is correct in his explanation as to one mode in which chyluria may occur; for we ourselves know of one instance of chylous hydrocele occurring in the practice of Dr. W. H. Mastin, of Mobile, Ala., in which the weeping lymphatic was actually exposed in a dissection,—appearing as a papular swelling, from the apex of which the lymph was observed to exude. Ligation of the papule was followed by a cure of the condition, whereas simple tapping previous to this operation had been ineffectual in preventing reaccumulation. The portion excised was sent to us for examination, and a cavernous lymphatic structure was easily demonstrated. That Ewald's suggestion would satisfactorily account for the intermittent character of the flow is also true, but difficult to prove, and until proof is adduced, it must be regarded as speculation, and not fact.

MYOCARDITIS.

J. Wickham Legg's "Bradshawe Lecture" on "Cardiac Aneurism," for 1883, and W. H. Welch's paper on the "Pathology of Myocarditis," read at the meeting of the American Medical Association, in May last, indicate a revival of interest in the subject of the non-valvular affections of the heart. These investigations, like others which, since the days of Corvisart, have been from time to time carried on in the same field, are wholly within the domain of pathology. When contrasted with the importance of this group of cardiac lesions, the amount of clinical work brought to their study is surprisingly small, and the results are still more insignificant. It is true that much attention has been bestowed both from the pathological and the clinical standpoint upon fatty heart, the acute parenchymatous degenerations of fever and phosphorous poisoning, and the loss of tone in the heart-muscle which accompanies general debility. Without undervaluing the importance of these conditions, we do not hesitate to say that infrequency of occurrence, gravity of symptoms, and as an immediate cause of death, myocarditis, in its various forms, constitutes an affection not less worthy of attention.

Within recent years Rigal and Jubel-Renoy, in France, and L. M. Petrone, in Italy, have sought to clear up the symptomatology of myocarditis and to establish rules for its diagnosis. But the clinical papers upon this subject may be counted upon the fingers of one hand, and in a majority of the works on diagnosis, myocarditis does not find place even in the index. The causes of this are not far to seek. During the last fifty years, clinicians have been engaged in elaborating and refining the art of auscultation, and in analyzing its signs until the diagnosis of those diseases of the heart which are characterized by coarse alterations in structure is an almost perfect procedure. Meanwhile, the recognition of affections not manifest by specific signs, but by feebly marked deviations from the normal, and by a vague or blurred symptomatology, has been overlooked. At the bedside myocarditis is practically an unknown disease. Even when its presence is suspected, there are, as yet, no means by which a definite diagnosis can be reached. Examinations ending in uncertain results have little attraction for the practical physician. Hence, the unfortunate neglect into which this disease has fallen. We do not believe that the resources of clinical medicine are unequal to the task of recognizing most of the forms of this disorder, or, indeed, to that of tracing out the obscurities of its etiology. We believe it to be simply an untilled field that is rich in promise. The results of laboratory work will accumulate until sufficient data for clinical study are at hand. To arrange, differentiate, exclude, and classify, are processes that await only the accumulation of facts and cases. Already, much has been accomplished. It is now known that neither endocarditis nor pericarditis is a necessary accompaniment of myocarditis.

Welch has found myocarditis in the examination of cases which may be clinically grouped as follows: *First*, when there is no symptom of heart disease. *Second*, sudden death without previous heart symptoms. *Third*, sudden death preceded by one or more attacks of angina pectoris. *Fourth*, after cardiac insufficiency of a few days' standing. *Fifth*, in cases of old heart disease. Jubel-Renoy regards the diagnosis of chronic myocarditis as having attained already some clinical exactitude. He arranges the diagnostic data into three groups: 1. Enfeeblement of the systole, and of the pulse,

with augmentation of the frequency and persistence of regularity. 2. Moderate hypertrophy, varying within considerable limits, which are determined by the amount of dilatation present. 3. The common absence of murmurs; occasionally the occurrence of a soft, systolic mitral murmur, often temporary. Then *bruits de galop*, tricuspid blurring, pulmonary congestion, often unilateral, all coming and going until asystolism, gradually developing, brings the scene to an end.

ALBUMEN OR ALBUMIN.

Albumen spelled with the vowel *e* in the last syllable has been used in the English language, probably for centuries, to indicate a nitrogenous principle which constitutes the chief part of the white of egg, and is found in the serum of the blood, chyle, synovia, serous fluids, etc., and sometimes also in the urine, generally as an abnormal constituent. It was evidently adopted directly from the Latin *albumen*, for white of egg. And the English adjectives, albuminous and albuminoid, have been properly spelled with an *i* in the third syllable, in accordance with the termination of the root, which is formed from the genitive *albuminis*. On the other hand, German writers, particularly physiological chemists and urinologists, have for some years spelled the noun with an *i*. Such is the spelling of Gorup-Besanez, of Hoppe-Seyler, Neubauer and Vogel, Hoffmann and Ultzmann, and others. But that this spelling is not the only one used by Germans is proved by consulting Lucas's Dictionary, German-English part, in which we find the word album*e*n, and album*i*n is not given.

Recently a few English-writing physiologists and urinologists, notably, Foster in his text-book of Physiology, have adopted the German orthography, which may also be said to be the French, although in that language the last syllable is *ine*. Dr. Millard, in his recent work on Bright's Disease, has also used this spelling, and in an article just published, expresses his surprise that English-writing physicians should continue to use the older style, but we think a careful examination of the history of the use of the word fails to justify his emphasis in the matter. The early German writers use the term *Eiweiss* so constantly for albumen that it appears to us not unlikely that albumin was a later introduction from the French, the terminal *e* of the last syllable being omitted. While we admit the desirability of uniformity, we do not see sufficient reason for English writers deviating from the original well-founded spelling of the word.

TUBERCLE BACILLI IN DEEP-SEATED TISSUES.

In some recent studies published in the *Wiener med. Wochenschr.*, March 29th, on tuberculosis, Weichselbaum took pains to look for the bacillus tuberculosis in tubercles most deep seated, and distant from the external air, including the inner membranes of the brain, the thyroid gland, the endocardium, the liver, the spleen, the kidneys, the peritoneum, and the omentum, and in none of these situations did he fail to find them. The number, it is true, varied greatly, and sometimes sections of nodules from the liver and spleen contained but one to three, while in other tubercles, especially the pia mater and peritoneum, including the omentum, the number was so great that even with a low power the places of their accumulation could be easily recognized.

These observations are important, in comparison with those of Formad. Weichselbaum found that with the onset of caseation the number of bacilli diminished materially, and they were confined more and more to the periphrey, or to the giant cells. According to Formad, on the other hand, bacilli are more numerous when the tubercle begins to soften.

Weichselbaum also ascribes the failure of many observers to recognize bacilli, to imperfect staining, of imperfect optical appliances, or to inexperience. He considers an Abbe's illuminator and an oil immersion system essential.

TRANSMISSION OF TUBERCULOSIS.

The presence of bacilli of tuberculosis in the blood, in chronic tuberculosis, has a bearing upon hereditary transmission of tuberculosis, and also upon its spread by vaccination. For if a bacillus can reach the innermost tissues of the economy, why may it not travel also from the blood of the mother to that of the embryo? Why, too, may it not be transferred with the vaccine lymph. The possibility of either event dare not be denied, if Koch's views be acknowledged. At the same time, even admitting such possibility, it is plain that the chances of such an accident are so few, that we need not be influenced in our practice as to vaccination; while natural difficulties in the way of transmission from the blood of the mother to that of the embryo account for the frequency with which the children of tubercular parents escape the malady.

In like manner, it is a legitimate result of these facts, that it is not venereal disease alone which may be communicated from the male to the female in coitus. The man with tuberculosis of the seminal vesicles and urethra may inoculate the woman with whom he has intercourse, and thus produce a tuberculosis of the uterus and Fallopian tubes. Weichselbaum tells us of a case of tuberculosis of the seminal vesicles and urethra, in which the number of bacilli was enormous. A seminal fluid in such cases would naturally be loaded with bacilli, which, carried up

into the cavity of the uterus, might plant themselves in such favorable nidus as happens to be present. It is fortunate, in view of these facts, that tuberculosis of the genital apparatus of the male is as rare as it is, else we would find such mode of transmission more frequent. In the meantime it behooves practical physicians to bear these views in mind and apply to them the test of experience and observation.

SOCIETY PROCEEDINGS.

AMERICAN NEUROLOGICAL ASSOCIATION.

Tenth Annual Meeting, held in New York, June 18, 19, and 20, 1884.

(Specially reported for THE MEDICAL NEWS.)

WEDNESDAY, JUNE 18TH—FIRST DAY.

AFTERNOON SESSION.

THE VICE-PRESIDENT, DR. WILLIAM J. MORTON, read a letter of regret from the President, Dr. Robert T. Edes, of Boston, who was unable to be present, and then offered a few remarks himself, in the course of which he made a defence of specialism, particularly in the field of neurology. The specialists in this department, he claimed, had contributed more to general medical and surgical knowledge than any other class of writers, and this, he thought, justified the neurologist in his subdivision of scientific labor. Neurology is but following the general tendency of the times, and with better right than many other specialties, for it offers to its followers a field for investigations so vast, so fruitful, so impossible of exhaustion, that even if they should desire it they are precluded from equally extended investigations into other branches of medicine. To the sick the subdivision of labor is an advantage, since, other things being equal, this means skilled labor. Clearly, this field for work is all that the neurologist can attend to—it is certainly more than the general practitioner can keep up with. Dr. Martin also gave a retrospective glance over the past work of the Association, and referred briefly to its present condition.

He then introduced the PRESIDENT-ELECT, DR. ISAAC OTT, of Easton, Penna., who delivered the *Annual Address*.

The special subject to which this was principally devoted was a consideration of

THE PATHS OF THE VARIOUS FIBRES IN THE SPINAL CORD.

He said that it was now about seventy years since Charles Bell announced that the anterior roots of the spinal nerves were motor and the posterior sensory. Since then countless experiments had been made, and there had been a gradual increase in the knowledge of the physiology of the cord, which was due principally to improvements in technique. He said that he knew of no more deceptive thing than to assert the extent of disease of the spinal cord without a careful microscopic examination. In regard to the paths of coördination, there had been various opinions up to 1840, when Longet made numerous experiments upon the subject, and announced, as the conclusion, that the anterior columns of the cord were motor and the posterior ones sensory. Prof. Schiff's idea of the spinal cord was that the posterior columns conducted tactile impressions, that the gray matter conducted in all directions afferent impulses which gave rise to affections of general sensibility and such afferent impulses as were concerned in reflex action. Dr. Ott then mentioned various views to show that the facts put forth were greatly in need of correction. After alluding to the experiments and remarks of Finch, Ludwig, Schiff, and others, he said that the observations of Ludwig proved that in the lumbar cord of the rabbit sensory and motor fibres ran in the lateral columns. Afterwards, with the assistance of Dr. R. Smith, he had himself proved the same statement to be true for the cervical segment of the spinal cord of the rabbit. To these experiments the objection was rightly urged that the animal was not permitted to live for a considerable time after the operation. But experiments of his own on kittens which sustained these injuries for several weeks proved that, in addition to the lateral columns, the anterior columns contained voluntary motor fibres. He then referred to a number of experiments on dogs by other observers, and remarked that only one recent authority still defended the theory that the motor and sensory fibres did not lie mainly in the lateral columns. All the later experiments went to show, he said, that the lateral columns are the principal conductors of sensation and motion, that the gray matter does not directly participate, that the anterior columns conduct voluntary motion. In regard to the posterior columns, he could substantiate Prof. Schiff's assertion that, after bleeding a rabbit and dividing the whole cord except the posterior columns, impressions of touch are conveyed by the posterior columns. In conclusion, he said that he should also like to state that decussation of fibres in the central nervous system is quite extensive, that the motor, sensory, vaso-motor, sudorific, and inhibitory (the two latter running in the lateral columns) are over each other.

AN EXHIBITION OF PREPARATIONS

was then made by DR. BURT G. WILDER, of Ithaca. The first one illustrated the *existence and circumscription of the portæ (foramina of Monro) in the adult human brain*, and he said that he was moved to present it, first, because he was not aware that any just such preparation had previously been made; and, secondly, because Mr. Duval had contended that the foramina of Monro did not exist at all in the adult human brain. He then described the manner in which the brain exhibited had been prepared. It was kept in the dura mater, and having been suspended by threads in a, at first, weak solution of alcohol, the infundibulum was removed, and, by means of a canula, alcohol at a temperature nearly of freezing was forced through the arteries for about ten days, by which process it was thoroughly hardened. The specimen plainly demonstrated to the eye the dorsal boundary of the foramen of Monro.

The second preparation exhibited was a portion of the brain of an infant at birth, hardened in the same manner, which showed distinctly *the presence of the crista fornicis*. This feature seemed to be always present in the brain of the cat, as he had examined the brains of hundreds of these animals, and had never as yet found it absent. In the human subject, however, it

disappeared as the child grew older; and, so far as he knew, it had never been observed in the adult. It was presumable that in all mammalian brains it existed at some period of life.

He had of late discovered two additional cases of *absence of the corpus callosum in the domestic cat;* but had, unfortunately, neglected to bring the specimens with him. The number of instances in which he had now found this wanting seemed to indicate that if brains were more frequently examined with proper care this anomaly would be found not to be so rare as had heretofore been generally supposed.

The last specimen which he exhibited showed the *covering of the cerebellum by the cerebrum in a young chimpanzee* whose brain was hardened within the skull. It was one which illustrated very well the necessity of making such preparations with great care. When the orbital lobe was made horizontal, the tip of the occipital lobe was seen to project about a millimetre beyond the cerebellum.

DR. AMIDON then exhibited a *human brain in which the corpus callosum was absent,* and said that he would read the history of the case at a future session.

DR. E. C. SPITZKA remarked that as one proceeded from the lower to the higher orders of animals the cerebrum and cerebellum both became more intricate, and that in the lower monkeys the overlap was much greater than in the chimpanzee and other anthropoid species.

A REPORT FROM THE COUNCIL

was presented, recommending the election of certain new members to the Association, but, as a quorum had not been present at this meeting of the Council, the report was, on motion, laid on the table.

The Association then proceeded to the nomination and

ELECTION OF OFFICERS

for next year, which resulted as follows:

President.—Dr. Burt G. Wilder, of Ithaca, N. Y.

Vice-President.—Dr. Leonard Weber, of New York.

Secretary and Treasurer.—Dr. G. M. Hammond, of New York.

Councillors.—Drs. W. R. Birdsall and W. J. Morton, of New York.

Evening Session.

ELECTION OF NEW MEMBERS.

A report of the Council was read by the Secretary, recommending for membership in the Association Dr. G. Betton Massey, of Philadelphia, and Drs. George W. Jacoby and Sarah J. McNutt, of New York; and these candidates were then duly elected by ballot.

THE REPORT OF THE COMMITTEE ON THE HAMMOND PRIZE ESSAY OF THE AMERICAN NEUROLOGICAL ASSOCIATION

was then read. The subject proposed for the prize essay was, *The Functions of the Optic Thalamus in Man.* Only one essay had been received; but this was a very elaborate thesis, written in German. After giving a minute analysis of its contents, the report stated that it possessed great merit and constituted a valuable contribution to scientific literature, but that it hardly met the requirements demanded in a prize essay on the subject in question, since it treated the functions of the thalamus in a too restricted way, while the part of it relating to the human physiology was scanty and inconclusive. The prize, therefore, was withheld for the present year.

In the discussion which followed the reading of the report of the committee, the opinion was quite generally expressed that the prize ought to have been awarded to the essay described, and the matter was, therefore, on motion of Dr. Wilder, referred back to the committee for further consideration.

DR. BURT G. WILDER, of Ithaca, N.Y., read a paper on

MACROSCOPIC ENCEPHALIC NOMENCLATURE.

His idea was to simplify names in use as much as possible and render them more flexible. There are two sets of terms recommended; the one applicable to toponomy and the other to encephalic organomity. Having alluded to one or two other modes of subdividing the brain, he mentioned that it could be divided into a series of five segments, the principal parts of which were the medulla, cerebellum with the pons, the optic thalami, and the cerebrum (the olefactory lobes being a division of the last). He proposed to take up the different parts of the brain in categories, and separate the heterogenous mass of terms which was now so cumbersome. The technical names which he proposed were brief and composed each of a single word, and monomial technical nomenclature possessed the following advantages: (1) brevity, (2) flexibility, (3) adaptability, (4) capacity for uniform abbreviation. In speaking of the flexibility, he remarked that the names could readily be turned into adjectives. Thus, it was hardly admissible to make an adjective of dura mater or pia mater; but there was no difficulty whatever about the terms dural and pial. The adaptability of the nomenclature was shown by the fact that any single word might be adopted into any language based on the Roman alphabet. Professor Wilder then referred to a list which he had made out for the use of students and others. In it single words took the place of compound ones, as for instance, dura and pia, instead of dura mater and pia mater, alba for white matter, calcar for hippocampus minor, hypocampa for hippocampus major, callosum for corpus callosum, cineria for gray matter, porta for foramen of Monro, and thalamus for thalamus opticus. Then, there are certain abbreviations which are somewhat of the character of nicknames, such as proen. for proencephalon (cerebrum), dien. for diencephalon, epon. for eponcephalon, mesen. for mesencephalon, and meten. or metencephalon ("medulla" as far as the pons). Instead of the Latin word ventriculus (English, ventricle) he uses the Greek κοιλια (English, cele). The ventriculi lateralis thus became the procœlia or procele (first and second ventricles, together with the aula and portæ); the third ventricle, the diacele; the fourth ventricle (its cephalic part), the epicele; the caudal portion of the fourth ventricle, the metacele; and the aquæductus Sylvii, or iter a tertio ad quartum ventriculum, the mesocele.

On motion of Dr. Amidon, the discussion of Dr. Wilder's paper was postponed until the following day.

DR. A. D. ROCKWELL, of New York, read a paper on

A CASE OF TONIC SPASM OF THE DIAPHRAGM (?).

The case had been under observation for a long time, and was believed to be unique in character. For this

reason and because its pathology was so obscure he presented it in the hope that light might be thrown upon it by some of the members of the Association. The patient was a lady, 35 years of age, and the mother of four children, who first began to suffer from the present trouble twelve years ago. The paroxysms which caused her so much distress were substantially the same both in kind and severity then as now, but their recurrence had been marked by uncertain and varying intervals. Before the present year they seldom occurred more than once a year, and sometimes two and three years intervened between the attacks. During the months of April and May past, however, the attacks had been very frequent. For some time they continued every day, and occasionally twice a day; so that her strength was fast becoming exhausted. Formerly no special hour marked the occurrence of the paroxysms; but latterly they had occurred in the morning between the hours of five and seven. They were described as follows: The patient is awakened out of a sound sleep by a vague feeling of pressure and distress, which soon develops into the symptoms now to be described. The pain, or rather distress (for there is nothing about it that even simulates anything of a neuralgic type), is felt about the lower end of the sternum and over the epigastrium, and extends to a corresponding point in the back. It is as if a crushing weight were being applied—as if the front and back were being pulled together. So sure is the patient in her own mind of these subjective phenomena that she has always declared that they could be caused by nothing else than a spasmodic contraction. The recumbent position is impossible; and so she moves about the room partially bent, or leans forward against any support, with short and gasping inspirations, pallid countenance, and with agony depicted in every feature, until the paroxysm subsides, or until the anguish becomes unendurable, and necessitates the administration of an anæsthetic. The pulse becomes weaker and somewhat less frequent, but is not at all irregular. The attack lasts from twenty minutes to three-quarters of an hour, and after passing away leaves the patient much prostrated. From this, however, she quickly rallies; but a bruised and sore feeling remains for many hours.

On one occasion, about two years ago, she awoke in the night with the paroxysm, which culminated so rapidly that before the chloroform, which was immediately resorted to, could take effect, she became quite pulseless and apparently lifeless; and it was only on pushing the anæsthetic that the pulse became stronger and the inspiration apparent. Several repeated administrations of the chloroform were necessary before the attack was finally broken up. For several years, as these paroxysms, were so unfrequent, and the general health continued good, chloroform was almost the only remedy employed, hypodermatic injections of morphia having been found insufficient to cause relief. When they began to occur frequently, however, many efforts were made to prevent their recurrence. Electricity was tried in all its forms, together with a varied internal treatment; but without avail; and it was not until he resorted in despair to the use of the actual cautery that the attacks seemed to be at all controlled. To his great relief, none had occurred since its application, nearly a month before; and, what was also a great source of relief to him, the general health and strength had markedly improved with the rest thus afforded.

That this was a case of spasm of the diaphragm the patient, who was not altogether devoid of anatomical knowledge, was firmly convinced. Having referred to other possible hypotheses in regard to the trouble, such as biliary calculus, disorder of the heart and malaria, and shown them to be untenable, Dr. Rockwell stated that, after years of observation in this particular case, he was himself quite convinced that the symptoms were due to a spasmodic contraction of the diaphragm, notwithstanding the absence of certain objective symptoms, such as expansion and immobility of the lower half of the chest, projection of the epigastrium and closure of the œsophagus, that he had found emphasized in print and speech. In connection with the apparent efficacy of the actual cautery, he referred to a paper which he read some years ago before one of the New York societies, on the use of the galvanocautery, one of the cases reported in which was kindred to and as unique as the one now related. The patient was suffering from a supposed organic stricture of the œsophagus. In consultation with the late Dr. Willard Parker, it was demonstrated that the obstruction to the passage of food was due to spasmodic contraction, excited by the introduction of anything into the tube. This condition had been persistent for several months, and the patient was slowly dying of inanition. Every spasm was associated with severe pain in the dorsal region of the spine. After the examination revealed the true character of the disorder, the actual cautery was applied along the spine over the seat of the pain, and resulted in immediate and permanent relief of the spasm, the patient thereafter being able to swallow solid food without the slightest difficulty.

DR. DANA inquired what reason Dr. Rockwell had for excluding angina pectoris, which was sometimes characterized by much the same symptoms as those described in this case; to which he replied that the seat of distress was so low down and so limited (the pain not being transmitted upward at all) that it had not occurred to him that the trouble might be angina. He had seen a number of cases of the latter affection, and the symptoms had been so different from those met with in this instance, that it did not seem possible to him that the disorder could be of that nature.

DR. BIRDSALL inquired whether he was entirely satisfied that two affections could be excluded, viz., hysteria and hepatic calculus, either of which might possibly offer an explanation of the phenomena noted; to which Dr. Rockwell replied that he was perfectly satisfied in his own mind that the trouble could not be hysteria, but that the matter of hepatic caculus he had not taken into consideration.

DR. DANA then said that it seemed to him a physical impossibility that the diaphragm should be in a state of tonic spasm without the abdominal walls being either tense or protuberant. One could not make any experiment with reference to the diaphragm, either in his own person or in others, without exciting such a condition of the latter. As well might we expect contraction of the biceps without the flexing of the forearm. The ability to swallow, especially solid food, would also seem to exclude spasm of the diaphragm.

DR. ROCKWELL remarked that he would like very much to know precisely what the trouble was in this case. Spasm of the diaphragm had seemed to him to offer the most satisfactory explanation of the symptoms; but that he was not by any means positive in this diagnosis was shown by the fact that he placed an interrogation point after the above designation in the title of the paper. As he had mentioned in his report of the case, there were certain points which seemed to militate strongly against the hypothesis of diaphragmatic spasm, according to the views generally accepted in regard to that rare affection; but it had occurred to him that there might perhaps be possible a slighter form of spasm of the diaphragm, in which the phenomena referred to were either absent or else developed to but a small extent. As regards the matter of deglutition, the patient had always been able to swallow a little whiskey during the paroxysms when the effort was made (which he thought would be possible even if the œsophagus was pressed upon in some degree), but she had never attempted to take any solid food.

DR. SPITZKA said he thought that the absence of protrusion of the abdominal walls during the paroxysms might perhaps be compensated for by a general expansion of the thorax; but Dr. Rockwell stated that he had never noticed that there was any such expansion. The only external phenomenon that he had observed was a slight fluttering appearance over the epigastrium. Dr. S. G. Webber having inquired where the cautery was applied, he stated that it was applied all along the spine, from the neck to the waist.

THURSDAY, JUNE 19TH—SECOND DAY.

AFTERNOON SESSION.

DR. WM. A. HAMMOND, of New York, explained that he thought the committee on

THE PRIZE ESSAY

were perfectly justified in excluding the thesis that had been presented to them, notwithstanding its very great merit, on the ground that it contained very little original research in regard to the functions of the optic thalamus in man (which was the point that was regarded essential in order to secure the prize).

On motion of DR. WILDER the minutes were amended by the striking out of so much of the motion which he had made at the previous session as referred the matter of the prize essay back to the committee for further consideration.

ELECTION OF MEMBERS.

The Council reported that they had unanimously recommend for associate membership, Dr. Danillo, of St. Petersburg, whose name was proposed by Dr. Wm. J. Morton. At a later session he was duly elected, and Dr. J. Leonard Corning, of New York, was elected an active member.

The discussion of Professor Wilder's paper on

ENCEPHALIC NOMENCLATURE

was then declared in order.

DR. WILDER begged leave to present a portion of his manuscript which, owing to the lateness of the hour, he had omitted to read at the preceding session. He said he desired to offer, as a basis for discussion, the three principal arguments which had been urged against the adoption of the nomenclature which he proposed. The first of these was that some of the terms now in use were *indicative*. This, he acknowledged, was a strong point, and in certain instances it was unanswerable. At the same time, by using a single short word for a long compound name the difficulties of encephalic nomenclature would be rendered much less perplexing, as, for instance, the adoption of the simple word *iter* for the *iter a tertio ad quartum ventriculum*. In this way the term *biceps* had already been adopted into the vernacular. All the names of the new nomenclature could be learned in a week's time, and if their acquisition were attained gradually by the student, no effort would be required in the matter. Such a short and simple word as *lenum*, he certainly thought, was preferable to a long and high-sounding term like *torcular Herophili*. The second argument was, that some of the old designations were commemorative, as the *foramen of Monro* and the *fissure of Sylvius*; but as many of them were altogether unjust, he did not think the objection had much weight. The third was, that most of the present terms were familiar; but this seemed to him a puerile argument, which applied with equal force to almost every advance in the scientific world. The proposed nomenclature might necessitate a little effort on the part of those already familiar with anatomical terms; but the beginner would be able to learn the new names much more quickly than the old. In conclusion, Dr. Wilder read the following resolutions, which, he said, would in due time be presented for the consideration of the Association:

Resolved, That in the opinion of this Association the advancement and dissemination of an accurate knowledge of the macroscopic anatomy of the brain will be facilitated by substituting for many of the polynomial terms, technical and vernacular, now in use, technical names which are brief and consist each of a single word.

Resolved, That we recognize the advantages of using such monomial compound terms as antiplexus, diatela, mesocœlia, hemiseptum, præcommissura, medipedunculus, postcornu, and cognate words proposed by Professor B. G. Wilder, and see no serious objection thereto.

Resolved, That there be appointed by the Chair a committee of five on macroscopic encephalic nomenclature, with instructions to report at the next meeting a list of such terms as, in their judgment, may properly be recommended for use.

DR. DANA said that he had taken a great deal of interest in Professor Wilder's work of reform, and the matter had appealed to him all the more forcibly as a teacher himself. He begged leave, however, to offer a few criticisms that had occurred to him. Many of the points advocated by Dr. Wilder, he thought, were admirable, and he had no doubt that they would eventually be adopted. But, on the whole, it seemed to him that Dr. Wilder took too much the position of an anatomist and of an anatomical teacher. It was desirable to have terms that medical students could acquire readily; and this, he thought, was not the case with many of the proposed names. Dr. Wilder seemed inclined to sacrifice too much for the sake of brevity, and the adoption of such abbreviations as *dien.* for diencephalon, and *meson.* for mesencephalon, he considered entirely unjustifiable and

unnecessary. There was no harm in giving the full word, which conveyed some meaning to the student, and therefore assisted him in the acquisition of the technical terms. As well might we adopt a series of arbitrary words from the Chinese or Japanese as such "nicknames" as these. Dr. Wilder also showed a strong tendency to increase the already large number of anatomical landmarks in the brain, and thus render the matter more complicated, instead of simplifying it.

Thus, he thought, there was no necessity for the introduction of the term *ripa* (defined by Dr. Wilder as the line formed by the rupture of the endyma along the lines of its reflection from the entocœlion surfaces) to describe a little artificial part of the brain. He thought it would be much better, therefore, if he would devote his energies to reducing the number of terms already in use, instead of manufacturing new ones. He believed, too, that he made a mistake in endeavoring to substitute new words for some of the old ones which were universally received and understood, and which there was no necessity whatever for changing; as, for instance, *alba*, for white matter, and *mesocele*, for the aqueduct of Sylvius. His idea seemed, simply, to get a monosyllable instead of a polysyllable in many instances. He objected also to the substitution of *κοιλια*, or *cœlia*, for ventricle, and to the formation of adverbs by the termination *ad*. Finally, he considered it a bold thing for one man to attempt to revolutionize an entire nomenclature; and thought that if Professor Wilder was really desirous of having his views adopted, he ought to submit them to an international commission, rather than to try to secure this end single-handed. At the same time he wished fully to recognize the great value of the services which he had already rendered in the direction of facilitating the study of the brain.

DR. BIRDSALL thought that the Association ought to be proud to subscribe to the admirable system devised by Professor Wilder, whose researches had reflected so much honor upon it. The only valid objections that could be urged against it, he believed, were in reference to certain details of terms, and he himself strongly objected to the nicknaming of scientific words. If the word meant anything it should be retained as a whole, provided it was not too cumbrous. In writing, it was often desirable to make use of abbreviations, but there was no necessity for employing them in speaking. Dr. Dana's objection that Prof. Wilder wished to multiply rather than reduce the names, he thought was not a sound one; for while there were many little points about the brain which had already received names, but were of no practical significance whatever, so far as known, there were others which were of essential use, especially to the comparative anatomist, which had not as yet been designated by special terms. As to whether the object desired by Prof. Wilder could not be secured by himself or by the action of societies was, he thought, an open question; especially when it was remembered what had been accomplished by such men as Orne and Huxley. Single individuals might make up consistent nomenclatures, and he thought Prof. Wilder showed a very generous spirit in expressing his willingness to submit the results of his labors to the judgment of a committee, as he had proposed to do. He had one suggestion to make, and that was, that if the committee arrived at any conclusion in regard to this matter, it should invite the coöperation of learned bodies in Europe, so that, if any changes were thought desirable, their adoption might be the more readily secured throughout the scientific world. This kind of work was more of an international character.

DR. WILDER remarked that in his resolutions he had carefully excluded all reference to those abbreviated terms which seemed to excite the most opposition. In regard to his nomenclature in general, he would say, that if those present were as familiar with some of the other anatomists as they were with Quain and Gray, they would find that he had in reality originated very few of the terms employed.

On motion of Dr. Wm. A. Hammond, the consideration of the resolutions read by Dr. Wilder was postponed until the session of the following day.

DR. G. M. HAMMOND, of New York, then read a paper on the subject,

CAN LOCOMOTOR ATAXIA BE CURED?

He said that, as time had passed, reports of cases of this affection cured had come before the profession, many of them made by men of such undoubted learning and high reputation that we could not afford to overlook them. The question, therefore, that arose was, Are these true cases of ataxia, or is there some other morbid condition of the spinal cord which, when present, gives rise to symptoms similar in every respect to those resulting from sclerosis of the posterior columns?

He had collected a few cases of undoubted cure of what was supposed to be locomotor ataxia, and he thought that their histories and the different methods of treatment employed went far to settle the question of the curability of posterior spinal sclerosis.

Case I.—The patient, whom, he said, he was fortunately able to present before the Association for the second time, was the subject of a short paper which he read last year. He then exhibited him as a case of locomotor ataxia cured, and he was happy to say that the cure had so far stood the test of time. Having related the history in detail, Dr. Hammond stated that when the patient came under his care he applied the actual cautery several times to the spine, together with dry cups, the ether spray, and static and galvanic electricity. From this time the patient began to improve until complete recovery, with return of the tendon reflex, ensued. On this latter point he had him tested by several members of the Association at the meeting in June last, and he had had no treatment whatever since then.

Case II.—Reported by Desplot (of Lille) in *L'Union Médicale*, Nov. 29, 1883. Patient 54 years of age. Had contracted syphilis twenty years previously. Symptoms of locomotor ataxia of five years' standing. Treated with Gibert's syrup and mercurial frictions. In five days an amelioration of the symptoms, and in five months a complete cure.

Case III.—Under the care of Dr. Wm. A. Hammond. Two years ago presented all the symptoms of locomotor ataxia. A specific history admitted. Treated with iodide of potassium and bichloride of mercury, alternating occasionally with nitrate of silver. The actual cautery was also applied to the spine, as well as dry cups, the ether spray, and galvanism. A complete cure gradually resulted, though there had been no return of the tendon reflex.

Case IV.—Reported by Schultz, of Heidelburg, in 1881. Patient, who was 48 years old, first seen in April, 1871. Had had symptoms of locomotor ataxia for a year, and had constantly been growing worse. Marked improvement followed the use of the galvanic current, and in two years he was considered completely cured. Several years afterwards he died suddenly during an attack of acute intoxication, up to the time of the latter having continued perfectly well (with completely restored tendon reflex on both sides), with the exception of slight eneuresis both at night and through the day. At the autopsy, however, diffuse degeneration of the posterior columns in the lumbar region was found, together with degeneration of the outer division of the posterior columns of the dorsal region and slight degeneration in the column of Goll. In such a case, Dr. Hammond thought, we were forced to conclude that some other condition of the cord, coexisting with or occurring separately from the sclerosis, was capable of producing a majority, if not all, of the symptoms of ataxia; and that this morbid state, under certain conditions, was capable of being removed by appropriate treatment. In support of this view, he quoted the following cases:

Case V.—Characteristic case of ataxia reported by Desnos. The patient died, and the autopsy showed that there was intense congestion of the cord, but not the slightest evidence of sclerosis of the posterior columns, or, in fact, any part of the cord, could be discovered.

Case VI.—Also reported by Desnos. Patient 24 years old. Specific history. Prompt recovery under antisyphilitic treatment. Desnos regarded this, also, as a case of congestion.

Case VII.—Reported by Dr. Henry Lyman, in the *Chicago Medical Journal and Examiner* for January, 1883. Well-marked symptoms of ataxia. At first treated with ergot, nitrate of silver, and galvanism, but did not improve. Diagnosis of ataxia confirmed by Drs. Seguin and Beard, of New York. Then, after using iodide of potassium and bichloride of mercury for some time, in addition to the nitrate of silver, some of his friends advised him to try Junod's boot. This he used on both legs, besides dry cupping on both sides of the spine, and in two years from the time he was first seen he was found to have completely recovered, with the exception of some slight degree of ataxia in the movements of the feet. The tendon reflex, however, had not returned.

Having briefly called attention to a few of the most interesting points in connection with the more striking of the above cases, he said that from a study of them he had arrived at the following conclusions:

1st. That the absence of the patellar tendon reflex in locomotor ataxia is not always caused by sclerosis of the posterior columns.

2d. That sclerosis of the posterior columns may exist without being accompanied by the ordinary prominent symptoms of ataxia.

3d. That congestion of the posterior half of the spinal cord may give rise to most, if not all, of the symptoms of locomotor ataxia.

4th. That it is impossible during life to make a differential diagnosis between posterior spinal sclerosis and posterior spinal congestion.

5th. That posterior spinal congestion is curable.

6th. That there is no evidence to show that sclerosis once existing in the spinal cord has ever been removed.

7th. That those cases of so-called locomotor ataxia which have been cured are simply cases of spinal congestion, more profound in the posterior half of the cord.

DR. WILLIAM A. HAMMOND thought that the author of the paper was probably correct in his opinion in regard to congestion of the cord, and said that a case had lately come under his care which went to confirm the truth of this hypothesis. Just about a month ago he was consulted by an English weaver, residing in Newark, and a man of great intelligence. At that time he was suffering from all the symptoms of well-marked locomotor ataxia, the lancinating pains in the limbs being of excruciating severity. There was, apparently, a history of syphilis, but the man was not at all sure whether he had had syphilis or not. He was ordered the iodide of potassium in large doses; but there had been no improvement whatever at the end of two weeks, although he was at that time taking sixty grains of the iodide three times a day, in addition to one-thirtieth of a grain of the bichloride of mercury. He then gave him codeia (which Dr. Hammond had found to be the best remedy for the relief of the lancinating pains of locomotor ataxia), to insure sleep at night, and one-quarter of a grain of nitrate of silver three times a day. The improvement that followed was extraordinary, and two weeks afterward all the symptoms of ataxia had entirely disappeared. The tendon reflex, which had been lost, was not only restored, but was found to be exaggerated. He did not know how else to explain this case except on the hypothesis of congestion of the posterior columns extending to the lateral columns of the cord.

DR. ROBERTS BARTHOLOW agreed with the author that some cases of so-called locomotor ataxia could be cured; but, what kind of cases, said he, were they? Some years ago he had cured a case with the iodide of potassium, but it was caused by mercury; and he had no doubt that there were to be met with at present many cases of metallic poisoning the symptoms of which were perfectly typical of true ataxia. Having spoken of the cases due to syphilitic gummata, which, he said, could be cured by iodide of potassium, he referred to those due to chronic syphilis, in which there was a true sclerosis, in consequence of the constitutional effect of the disease, and said that a sharp distinction ought to be made between these two classes of cases. Furthermore, he wished to express his conviction that under the use of remedies which were now available, and to one of which he would presently call the attention of the Association, many cases of genuine locomotor ataxia could be arrested. It was true that lost parts and the *status in quo* could not be restored, but it was possible, at all events, to prevent the degenerative tissue-changes from progressing any further.

DR. J. LEONARD CORNING thought that the cases referred to by Dr. Hammond in his paper were convincing. The fact that the autopsy in a well-marked case of locomotor ataxia revealed nothing but congestion seemed to him very conclusive sort of evidence; evidence that could not but be accepted. The effects of fluctuations in the blood-supply inside the cranial vault were recognized, and he did not see why they

should not be also in regard to the cord, although the vascularity of the parts might not be so great. One practical point of importance was, he thought, that—granting that a hyperæmia was the starting-point of the affection—we could, by relieving this condition, arrest its further progress.

DR. G. M. HAMMOND stated that, being obliged to withdraw before the conclusion of the discussion, he wished to say a few words on the remarks that had already been made. He did not consider, he said, that the cases with symptoms resembling those of locomotor ataxia which depended on spinal congestion and metallic poisoning, were cases of true ataxia. The existence of sclerosis was essential to constitute this disease, and sclerosis, he was convinced, was never cured. As illustrating this point, he refetred again to Schultze's case, which had been described in his paper.

DR. S. G. WEBBER said that Dr. Hammond had reported his case as the first in which the tendon reflex had been known to return. Last year, however, he had himself reported two or three cases which had had all the symptoms of locomotor ataxia, and yet in which the tendon reflex was restored. One of these cases he did not suppose to be a genuine one of ataxia. The others were more evidently cases of ataxia, and one of them had entirely recovered. The patient had since died of a cardiac complication, but, although there was an autopsy, the spinal cord had not as yet been examined. Déjerine had found at the autopsy of a case supposed to be one of locomotor ataxia that the pathological condition was really multiple neuritis, and it therefore seemed probable that some of the cases in which cures were reported were of this nature, instead of being cases of ataxia. He should question, he said, whether hyperæmia of the columns of the cord could continue for weeks and months without giving rise to organic changes; and such a condition was, at all events, not yet proved.

DR. A. D. ROCKWELL remarked that, after all, the cases of locomotor ataxia, or supposed cases of the disease, in which a cure was reported were so few in comparison with the whole number of cases that they were really of very little significance. In looking over his notes, he found that he had treated forty-four cases of the affection. In the beginning, he thought that he had cured a number of cases, but he was now convinced that they were not genuine instances of ataxia. He also had read of one case of peripheral multiple neuritis which had been mistaken for this disease. In cases simulating locomotor ataxia, he thought that static electricity was of considerable benefit, and both Dr. Morton and he had reported cases cured by means of this agent.

DR. MASSEY said that he had seen one case cured. This was a gentleman who was a mountain climber, and who took no care whatever of his health. In 1866 he had syphilis. When he came under observation he had nearly all the symptoms of locomotor ataxia in its earlier stages. In addition, he suffered from profound melancholy. For one year he continued to grow worse, in spite of treatment, but he then began to improve, and when seen by Dr. Massey three years after this time, he was apparently perfectly well, though the tendon reflex had not been restored. For the first two weeks of his treatment he was placed on large doses of iodide of potassium, but this seemed to have a bad effect, instead of causing improvement. Afterwards the treatment consisted of the use of protoiodide of mercury, galvanism, and the application of the faradic brush to the spine.

DR. C. K. MILLS said that he had seen a number of cases of pseudo locomotor ataxia cured, but he had never yet seen a case of the regular type get well. By this he said he meant that type which was recognized pathologically as posterior spinal sclerosis. The solution of the cure of pseudo cases had already been referred to in the discussion, and among the kinds of cases which were susceptible of cure were those due to syphilitic gummata of the cord, to meningeal inflammation (sometimes involving also the periphery of the cord itself), and multiple neuritis. In regard to the latter, he stated his belief that this affection sometimes eventually resulted in locomotor ataxia. He also referred to neuralgic and hysterical cases, and said that a knowledge of having been exposed to the danger of syphilis sometimes gave rise to the latter. In such cases the tendon reflex was not absent, as a rule. Congestion of the spinal cord, he thought, might give rise to many of the symptoms of posterior spinal sclerosis; but it was his own impression, that one could rarely say that there was a localized congestion of certain parts of the cord, as the posterior columns, for instance. It seemed more probable to him that there was a condition of meningeal congestion and irritation, or possibly of actual inflammation of the meninges. The point upon which he wished to lay special stress was, that, after all, the regular typical form of locomotor ataxia, recognized as dependent on extensive sclerosis of the posterior region of the cord, was not curable.

DR. MASSEY remarked that the case which he had described was evidently a typical one in all its symptoms (including diminution of sexual power), except that the pains are not so severe as was frequently the case. The patient was excessively nervous, but a man not at all given to introspection, and he thought that there was no hysterical element in the case.

DR. BANNISTER, of Kankakee, Illinois, mentioned two cases, in which most of the characteristic symptoms of locomotor ataxia were present, but which he believed were in reality instances of myelitis. There were no autopsies, however, to confirm this opinion.

DR. BIRDSALL said that he had had one case which he might have reported cured if he had done so in time; but after about a year's interval new symptoms began to develop. The patient was a woman, who experienced great relief for eight or nine months under the use of galvanism, etc. Up to that time the characteristic Argyll-Robertson pupil had not developed; but within the last six months this had appeared, and, in addition, there was now commencing atrophy of the optic nerve. There had been an increase of pain, but now in a new area, the upper extremities. There had been no return, however, of the former ataxic symptoms, and the tendon reflex had been restored. Here, then, was a case which at the end of a year, and for six months afterward, could have been reported cured; and, as far as the ataxia was concerned, this was still the case. This seemed to be an irregular case, in which other parts besides the posterior columns (in all probability the lateral columns) were affected. Dr. Birdsall also mentioned another case which was cured, as far as

ataxia was concerned, although the patient's patellar tendon reflex was still abolished. It seemed to him that many of these cases could show a long interval of time before the upper part of the end became invaded, and during this interval of repose were liable to be reported as cured. On the other hand, he believed there were many functional cases, and that there were still others that were due to localized lesions involving the lateral columns. In regard to the matter of congestion, he thought this was a speculative point which could not be definitely pronounced upon at present; but he agreed with Dr. Webber, that it was difficult to accept the proposition that congestion could continue for an indefinite period without giving rise to organic changes.

DR. S. G. WEBBER, of Boston, then read a paper on

MULTIPLE NEURITIS.

Neuritis, he said, had lately assumed an importance which had not formerly been accorded to it, and it had only been within a very few years that a more general inflammation of the nerves had been recognized. Having given a *résumé* of the bibliography of the subject, he said that up to this time he had found records of six cases without autopsies and twelve with autopsies. He then proceeded to relate in minute detail, four cases which had been under his own care at the Boston City Hospital. One of these had been in a boy and the other three in women. One of the latter was almost moribund when admitted, and died the next day afterward; and another died seventeen days after admission, there being in this case various complicating affections. It was from this last patient that the specimens exhibited were taken, and numerous sections of the spinal cord, as well as of the nerves all over the body (nearly all of which were affected), were made. These cases, he thought, were sufficient to serve as examples. During the past autumn and winter there had been eighteen undoubted cases of multiple neuritis under treatment at the Boston City Hospital, and fourteen of them had been under his own observation. In addition, he had seen one case in private practice, and one other case in a child, in which the diagnosis was somewhat doubtful between neuritis and infantile paralysis. Of the nineteen undoubted cases, the youngest was nine years old, and the oldest fifty-one. More than half were between twenty and thirty years of age. An interval of from one week to four months elapsed in the different cases, between the beginning of the attack and admission to the hospital. The stay in the hospital varied from two days to six months, and, as a rule, the patients were not well at the end of four months after the trouble began. In five cases, taking cold was attributed as the cause of illness; but in the others there did not seem to be any assignable cause. Nine of the patients were females and ten males, and three deaths occurred among them.

Disturbance of sensation was one of the most constant and prominent symptoms, and the pain was described variously, as aching, burning, shooting, and boring. There was, as a rule, much hyperæsthesia of the skin, general tenderness over the muscles, and very marked tenderness along the tracts of nerve-trunks, which could often be readily traced by the sensitiveness of the parts. There was, at first, stiffness, and afterwards paralysis. The limbs became more or less contracted (being for the most part in a state of semi-flexion); and in some instances the contraction was extreme, the heels, for instance, being drawn up to the back of the thighs, and the knees nearly to the chest. Having dwelt for some time upon the condition of the various reflexes, which were not uniform (though the tendon reflexes were generally absent), he mentioned that the temperature and pulse were usually raised in the early stages, and in the two fatal cases this continued throughout the period when they were under observation. There was sometimes œdema of the limbs, and even of the face, and if there was also excessive smarting, as occurred in a number of instances, the disease was liable to be mistaken for rheumatic fever. The neuritis began most frequently in the legs. In fatal cases the disease made rapid progress.

Now that the peculiar symptoms of this affection had been clearly pointed out, the diagnosis was not difficult, except, perhaps, in slight cases. The diseases which it was most likely to be confounded with were, anterior poliomyelitis, spinal meningitis, locomotor ataxia, progressive muscular atrophy, lead paralysis, and acute rheumatism. Three or four of the cases mentioned, were supposed to be of rheumatic character when first admitted to the hospital.

In twenty patients suffering from the disease known in Japan as kak-ke, Scheube, who believed it to be due to a specific poison, had found neuritis in every case; and recently Dr. J. B. Lacerda had claimed to have discovered the bacillus of beri-beri. The nature of the pathological process in these cases was generally believed to be an inflammation of the nerves; but in September last, Erb had suggested (1) that it was possible and probable that purely functional disturbances of the trophic centres in the spinal cord produced anatomical disturbances (degenerative atrophy) in the periphery (the motor nerves and muscles); and (2) that it was possible that besides the complete destruction and separation of the trophic centres, yet other pathological processes occurred in them, which need not always go so far as to show themselves in the form of total degenerative atrophy of the peripheral regions of these centres. It had been shown, however, that Erb's hypothesis was less likely to be correct than that which referred the lesion to a peripheral neuritis. Having described the degenerative changes in the nerves as found in the case from which the sections were exhibited, and referred to the observations of Gombault, in rabbits, in which he had produced neuritis artificially, Dr. Webber said that, considering the changes found about the annular constrictions, it was reasonable to consider the disease as neuritis, not dependent upon changes in the spinal cord.

In most cases the patients recovered more or less completely, but recovery was very slow in severe cases; much time and patience being required to straighten the contracted limbs, and strength being regained very gradually. He was not sure, he said, that any treatment shortened the attack. Salicylic acid seemed to cut short the pain in some cases, and when it returned it was not quite so severe. It was necessary to give morphia to relieve pain. A four to five per cent. solution of carbolic acid applied on cloths to the painful limbs was of decided advantage. Ice to the spine felt grateful in one case, and hot water in another, while blisters over nerves seemed to be of advantage in one

or two instances, especially in a case in which the hyperæsthesia was very persistent. He thought it well to try to avoid or diminish the extent of the contraction by gentle extension or position of the limbs, a sandbag to rest the feet against, etc., as the contractions were difficult to overcome. To do so, required a persistent use of massage, extension, and electricity.

Dr. Rockwell said that in a case of his in which he made the diagnosis of multiple neuritis, what annoyed the patient most was burning sensations in the limbs. After trying various agents in vain for the relief of this, he finally stripped the patient naked, and touched the sensitive points all over the body with the actual cautery. He repeated this half a dozen times during the next six weeks, and it was followed by great relief. Whether this procedure had any ultimate effect on the course of the disease he could not say, as the case passed out of his notice.

Dr. Birdsall thought that Dr. Webber's contribution to this subject was one of great importance, as multiple neuritis was just beginning to be studied. He was not certain but what Erb was correct in his hypothesis that the affection was really dependent on cerebral changes; but this was a theory which no one could prove at the present time. It was certainly very interesting that such a group of cases as Dr. Webber had had the opportunity of studying should have occurred so nearly at the same time.

Dr. R. W. Amidon presented the brain taken from a patient suffering from *Word-deafness and Blindness, without Paralysis*, but omitted the reading of the case in order to permit Dr. Roberts Bartholow, of Philadelphia, to read a paper on

SOME USES OF THE CHLORIDE OF GOLD AND SODIUM IN NERVOUS AFFECTIONS.

Having stated that gold was mentioned in the *Anatomy of Melancholy* as a cure for that affection, and quoted the passage of the *Canterbury Tales* in which Chaucer says that "Gold in phisike is a cordial," he spoke of its use by the Arabian physicians in certain mental and nervous diseases; after which he referred to Trousseau's and Hahnemann's researches in regard to it. The homœopaths used it, he said, for the relief of hypochondriasis and of increased discharge of urine. Its principal effect was probably that of an alterant, or—as such agents are now more properly called—a promoter of tissue metamorphosis. It was of threefold service, he thought: *first*, as a general alterant; *second*, in nervous diseases; and, *third*, in genito-urinary diseases. The preparation which he himself preferred was the double chloride of gold and sodium, as this was readily diffusible, while the simple chloride of gold was diffusible to a very small extent. He used it in doses of one-twentieth of a grain, two or three times a day. It was a good tonic, and increased the number of red globules in the blood; but its chief effect was upon connective tissue. Hence, in pathological conditions in which the connective tissue was involved, it was likely to prove of service. In sclerosis of the posterior columns of the spinal cord, he did not claim that lost parts could be restored, but his experience with this remedy had been such as to convince him that by means of it the disease could often be arrested, and the further progress of the pathological changes permanently stopped. He advised that its use in locomotor ataxia should be supplemented by the application of the faradic brush to the spine. He had also used the chloride with remarkable success in fibroid kidney. In the form of hypochondriasis connected with changes in the cerebral vessels it was very effective. He recommended it in various forms of spasm, among which he mentioned asthma and laryngismus stridulus, and said that in the latter affection one of his medical friends now used no other remedy. In certain cases of sexual debility accompanied by extreme hypochondriasis no remedy was so serviceable, and it seemed to him that there was some truth in the ancient motto that "Gold is a cordial to the mind." In simple sexual debility its use was sometimes followed by remarkable increase of power, and in dysmenorrhœa and in chronic metritis with scanty menstruation it had been found to be of benefit. More extended experience was, of course, needed to prove what the real position of this agent was in medicine.

Dr. Dana said that he had a female patient suffering from hysterical melancholia, who had previously been under the care of a homœopath, who said that the latter had given her gold (in first dilution), and that it had always given her relief. Whether this was a mental or a therapeutic result he was not prepared to say.

Dr. Bannister said that he had once treated some patients suffering from melancholia with chloride of gold for a number of weeks, but had not observed any effect from its use. He had, however, never used the double chloride of gold and sodium.

Friday, June 20th—Third Day.

Afternoon Session.

COMMITTEE ON NOMENCLATURE.

On motion of the Secretary, Dr. Wilder's resolution providing for the appointment of a committee of five on macroscopic encephalic nomenclature, with instructions to report at the next meeting a list of such terms as in their judgment may properly be recommended for use, was adopted, and the Chair appointed the committee as follows: Dr. E. C. Spitzka, Chairman, and Drs. B. G. Wilder, T. A. McBride, W. A. Birdsall, and L. C. Gray.

On motion of Dr. Bartholow, the other two resolutions offered by Dr. Wilder were referred to this committee.

The Vice-President, Dr. Birdsall, having taken the chair, The President, Dr. Isaac Ott, read a paper on

THE RELATIONS BETWEEN INJURIES OF THE SPINAL CORD AND THE EXCRETION OF CARBONIC ANHYDRIDE.

By means of Arsonval's calorimeter and Voit's respiration-apparatus, he has made a series of experiments upon the lower animals (rabbits and cats), and has arrived at the conclusion that injuries of the cord produce, as a rule, an increase of the excretion of carbonic anhydride. It does not seem to make any difference whether the gray or white matter, or both together, are injured, the increase ensues just the same. Although the calorimeter was kept at 100° F., in only two cases out of seven did he see any increase of temperature. In all the others it fell below normal.

DR. G. L. WALTON, of Boston, read a paper entitled

A CONTRIBUTION TO THE STUDY OF HYSTERIA BEARING ON THE QUESTION OF OÖPHORECTOMY.

The question of oöphorectomy, he said, should be limited to those cases in which the hysteria is secondary to abdominal trouble, and carefully exclude those in which the menstrual irregularities and ovarian tenderness are secondary to the hysteria. Whether the operation should be limited to cases of organic pelvic disease cannot be determined with certainty; but this is at present the safer plan. The most plausible explanation of hysterical hemianæsthesia (common after ovarian irritation) is that of spasmodic contraction of the cortical bloodvessels of the brain, suspending the function of the cortical nerve-cells through lack of nutritive fluid. This theory explains best, for example, the rapid onset and disappearance of the symptoms; for we know that a thought is sufficient stimulus and an instant sufficient time to cause the most extreme changes in the calibre of bloodvessels, as instanced in the blush, on the one hand, and the pallor of fear on the other. That such sudden changes take place in the brain, as well as in the integument, is shown by the phenomenon of fainting, in which the cerebral functions are entirely suspended, presumably through the lack of blood. The transfer of anæsthesia from side to side with succeeding oscillations is suggestive of the ebb and flow of a fluid. That vaso-motor irregularities are common in hysterical patients in other parts of the body as well as the brain, is evidenced by the frequency of chills, flushes, and ischæmia, sudden swelling of the joints, etc. Weight was thrown on this theory, he continued, by the case published in a paper by him on oöphorectomy in hysteria in the *Boston Medical and Surgical Journal*, of June 5, 1884. In this case, right-sided hemianæsthesia coincided with left-sided angio-spasmodic migraine and left-sided intermittent retinal ischæmia (the bloodvessels of the right eye being normal). The only explanation to be offered was that spasm of bloodvessels by implicating the membranes caused the pain by extending into the cortex, the hemianæsthesia of the opposite side, and by reaching to the eye evidenced itself in the abnormal contractility of the retinal vessels of the same side. The starting-point in this case was pelvic disease, probably by irritation of the sympathetic nerves supplying the ovarian region. In favoring this theory he said he was dealing with a tangible phenomenon of which we had constant examples, and could not, therefore, be accused of a flight of imagination. He had failed to produce "transfer" in hysteria secondary to pelvic disturbance, but had observed it frequently in cases of constitutional hysteria. This was probably because the unilateral spasm was kept up in the one case by the organic trouble, while in the others the sympathetic irritability is alike on both sides of the brain; so that while the vessels are contracting on one side, they are dilating on the other. In conclusion, the case referred to (the principal points of interest in regard to which were given in the paper mentioned) was reported in detail. The patient was operated on by Dr. Barss; the removal of both ovaries, which were found to be in a state of cystic degeneration, being followed by marked improvement in hysterical convulsions and hemianæsthesia of thirteen years' standing.

DR. E. C. SPITZKA said that he had given some serious attention to this subject, and that he was free to confess that he was, at the present time, very far from being as clear in his own mind in regard to it as the author of the paper apparently was. If his theory was correct, he could hardly understand why the operation for the removal of the ovaries should not be followed by immediate relief. In the particular case which he had related, the improvement noted was not greater than often occurred spontaneously. Troubles such as he had described were liable to occur without any disease of the ovaries whatever. As to the author's vaso-motor explanation, it was theoretically very pretty; but the fact unfortunately remained that in reality we knew nothing at all about the matter. Dynamic conditions, in his opinion, offered a more satisfactory explanation. He then mentioned a case of his own, which, he said, had taught him a lesson, and which had rendered him very conservative in regard to Battey's operation. In great part, in deference to the opinion of eminent gynecologists, he gave his consent to having the operation performed in this instance. One ovary was removed, and, on examination, it was found to be but little diseased; but, in five days afterward, the patient died, without there having been the slightest change in any of the symptoms. In conclusion, he mentioned a case of hysteria and hystero-epilepsy, at the Breslau clinic, in which a cure was effected by the performance of a sham operation, the patient firmly believing that the ovaries had been actually removed.

DR. C. K. MILLS, of Philadelphia, stated that, in his opinion, in the vast majority of cases operated upon, relief might have been afforded without resorting to this extreme measure. All, he thought, had seen instances of hysteria, with symptoms as severe as those recorded in Dr. Walton's patient, in which this was the case. He then mentioned a case of hystero-epilepsy in which the clitoris and both ovaries were removed, and yet in which, notwithstanding the extent of the operation performed, the patient admitted that she had the same inclinations, and suffered from many of the same symptoms as before, while her mental condition, he thought, was worse in many respects. He believed that we should hesitate very long before recommending an operation of this kind for the relief of hysteria, since, in his opinion, hysteria, except in very rare instances, was not dependent on uterine or ovarian disease. The tendency to operate was very great at the present day, and in two instances that he knew of in which an operation was recommended, the functions of the ovaries had never been established. It would have been much better in these cases, he thought, to endeavor, by every possible means, to secure the establishment of these functions.

DR. J. P. PUTNAM, of Boston, remarked that he could not say that he subscribed to the theory of Dr. Walton; but, at the same time, he could not say why, in certain cases, the operation was not justifiable, just as it was acknowledged to be proper to remove other sources of peripheral irritation. Thus, eye-strain, although he thought its importance in the causation had been exaggerated, was sometimes one of the factors in the production of cerebral disease, and in a certain number of cases the relief of the eye-strain was followed by some amelioration of the trouble.

DR. ROCKWELL said that, in his position, in connection with the New York State Woman's Hospital, he had had ample opportunities for observation in this class of cases, and that he could not but acknowledge that in this institution the operation was performed, as a rule, only in those in which it was proper that it should be. He was convinced, however, that there was a considerable minority of cases in which symptoms were attributed to disease of the ovaries which were not in reality referable to this cause. In the Woman's Hospital, he had often noticed that hysterical, neuralgic, and abnormal sensory symptoms were completely relieved, while ovarian and uterine disease, of which the patient was the subject, remained in the same condition as before. He knew of at least one case also in which it had been proposed to remove the ovaries in which he had himself succeeded in securing a perfect cure by other means. Great care, he thought, therefore, should be used in the selection of cases for operation.

DR. MARY PUTNAM JACOBI, although not a member, having been invited to participate in the discussion, related two or three cases which had come under her observation, and made the point that whenever it could be shown that the ovaries were enlarged and prolapsed, and that they had resisted various methods adopted to restore them to their normal condition, it could be inferred that there was cystic degeneration of these organs. When cystic degeneration was determined to be present, it was only a question of time when they should be removed, for this procedure then became a positive necessity unless, as occasionally occurred, the ovary became converted into one large cyst; in which case it constituted an indolent tumor which gave rise to very little pain or other disturbance. In one case of this latter kind, with which she was acquainted, the patient had no trouble at all, except moderate dysmenorrhœa. On the other hand, there were cases in which there was no objective disease of the ovaries in which there were still some hysterical and neuralgic symptoms. It was this class of cases in which it was entirely questionable whether the operation would afford any relief, even in instances of the most violent pelvic neuralgia. In many cases, while removal of the ovaries put a stop to menstruation, it did not stop the pain; the neuralgic condition remaining the same as before. She did not know whether it had ever been suggested that the pain in cerebral hysteria (that is in cases in which the trouble could be referred to no local cause) was precisely analogous to the aura of epilepsy, which was supposed to indicate that certain changes were taking place in the cortex of the brain.

DR. WALTON said, in closing the discussion, that hardly anyone could be more conservative than himself in regard to the operation, unless it was some one who thought that this procedure ought never to be resorted to; since it was only in cases in which the hysterical symptoms were obviously secondary to pelvic disease that he would recommend it. To the objection that removal of the ovaries did not always cause immediate relief he would reply, that there were many cases in general practice in which a secondary condition was not relieved by the removal of the original cause, as, for instance, the extraction sometimes of a tooth whose condition had given rise to facial neuralgia. One cause why the relief had not been greater in the case which he had reported, he thought, was that the Fallopian tubes had been allowed to remain (the operation performed being Battey's instead of Tait's). Tait had repeatedly found that menstruation was very apt to continue unless the tubes, as well as the ovaries, were removed. Still, but a comparatively short time had as yet elapsed since the operation, and he trusted that the improvement would become greater as this period extended. He was quite willing to accede to the proposition that all these troubles might exist without there being any disease of the ovaries, and on this account he thought that the greatest possible caution should be observed in advising operative interference. If cases could be relieved without operation, he thought that all other means should be employed, and that in every instance the operation should be reserved as the last resort. As to hysteria *alone*, it was rare that one was called upon to advise operation for its relief. He agreed with those who believed that hysteria was almost always of cerebral origin, and that it was only in a comparatively few cases in which it was dependent on uterine or ovarian conditions. To sum up, he was in favor of operating only in those cases in which we were reasonably sure that organic disease of the ovaries was present.

DR. JAMES J. PUTNAM, of Boston, read a paper on

TYPICAL HYSTERICAL SYMPTOMS IN MEN, DUE TO INJURY, AND THEIR MEDICO-LEGAL SIGNIFICANCE,

during the course of which he related a case of railway injury followed by hysteria, and stated that in a medico-legal aspect, at least, it was very unfortunate that there should not be some standard of opinion established in regard to this subject on account of the confusion which now existed, and for which Erichsen was, to a considerable extent, responsible. The medical opinion in reference to hysteria was, as a rule, very different from that existing in the public mind, and the views of authorities like Erichsen and Page were completely opposed to each other.

DR. DANA said that he was particularly interested in this subject, as within a recent period he had been called upon for an opinion in two cases, in the one on behalf of the patient and in the other on behalf of a railroad company that was being sued for damages in consequence of injuries inflicted on a passenger. He therefore fully appreciated the difficulties to which Dr. Putnam had alluded. There was one point, however, to which he had not referred. Hysteria was, no doubt, a serious disease; but the question arose in every case such as he had described, whether the hysterical symptoms were due to the accident or were excited by the hope of reward. There are two classes of cases in which hysteria was liable after accidents. The first was where serious injuries were received, and the patient suffered immediately. The second was of two kinds: (1) those in which symptoms slowly developed, as in chronic meningo-myelitis, and (2) those in which there might be spinal concussion, followed later by hysteria or hypochondriasis. He had not found the existence of hemianæsthesia in men, as Dr. Putnam had. There was one objective symptom which might perhaps be of some value, and that was electric resistance.

DR. PUTNAM thought that this whole subject ought to be regarded from a different point of view than that from which it was now regarded. The slightness of the

injury did not seem to be of much consequence. In his own case the injury had been slight, and yet from the very first day he had been seriously affected. No thought of obtaining damages, he believed, could have had any effect in originating the hysterical trouble in this instance. He advised that sensibility should be tested in all respects for hemianæsthesia; the special senses as well as the skin. The question of atrophy was interesting in this connection. Flattening of the muscles, accompanied with a somewhat diminished temperature would be proof that the parts claimed to be paralyzed had been kept in one position for a long time, and the presumption would be, therefore, that the individual was not feigning. Electrical resistance, he argued with Dr. Dana, was an important point.

DR. SARAH J. MCNUTT, of New York, reported a case of

DOUBLE HEMIPLEGIA.

The patient was a child who had never walked or talked, and who died of broncho-pneumonia, with convulsions. The disease of the brain from which it suffered was attributed to injury to the head received at the time of birth. At the autopsy marked atrophy of the cortex (greater in the right than in the left hemisphere) was found on both sides, involving principally the paracentral lobule, the anterior central convolutions and the upper two-thirds of the posterior central convolution. The disease was pronounced by Prof. William H. Welch to be sclerosis of the greater part of the motor tract, with degeneration of the pyramidal tracts. There were no lesions in the vicinity of the island of Reil, but in the larynx there were found vegetations on both vocal cords, consisting of the natural tissue of the part.

EVENING SESSION.

On the unanimous recommendation of the Council, Dr. Augusta Foul, Professor of Psychiatry in the University of Zurich, Switzerland, who had been nominated by Drs. Seguin and Ott, was elected

AN ASSOCIATE MEMBER.

DR. W. R. BIRDSALL, of New York, read a paper on

OPHTHALMOPLEGIA EXTERNA PROGRESSIVA,

in which he reported two cases of slowly progressive paresis of all the external muscles of both eyes (the levator palpebrarum, the recti, and the obliqui) producing partial ptosis and nearly complete immobility of the eyeballs, with complete preservation of the functions of the internal ocular muscles (iris and ciliary muscles), accommodation being normal, and reaction of the iris to light and accommodation movements also normal. There was no perceptible lesion of the fundus. Vision was normal in one case, and defective from irregular astigmatism in the other. There was no evidence of disease in any other cranial nerve or in any part of the body. There was no heredity, and no signs or suspicion of syphilis. The patients were both males, aged respectively seventeen and twenty-nine. Slow improvement occurred in one case under large doses of iodide of potassium, and in the other, under the use of the same drug and faradization of the eyes. One case was referred to him from the hospital service of Prof. D. B. St. John Roosa, and the other by Dr. Wilson, of Bridgeport, Conn. Both cases were still under treatment.

Dr. Birdsall held that the lesion could not be due to intraorbital disease, nor to an intracranial lesion involving primarily the trunks of the nerves implicated, on account of the escape of those branches of the third nerves which supply the iris and ciliary muscles; and that it must therefore be an affection of the nuclei of the sixth, fourth, and parts of the third nerves, which supply the external ocular muscles—these parts representing an associated system concerned in movements of the eyeballs and in lifting the upper lids, somewhat distinct from the iris and ciliary muscles, which are more intimately connected with the functions of the optic nerve in the regulation of light, and are probably supplied, as far as the sphincter iridis and the ciliary muscles are concerned, from nuclei in close proximity to, but distinct from the nuclei of origin of the remaining third nerve-fibres, which supply the external ocular muscles. A gross lesion, such as a neoplasm, meningitis, arteritis, or a local softening, could hardly affect so widely separated nuclei as the third, fourth, and sixth nerves, and not at the same time affect the ciliary and pupillary centres, those of the fifth and seventh nerves, or other neural tracts. Degeneration within this system of associated muscles, nerve tracts, and centres, similar to the degeneration of progressive muscular atrophy and of labio-glosso-pharyngeal paralysis, appeared to be the most consistent theory of the pathology of these cases.

Dr. Birdsall stated that Hutchinson, in 1869, had advanced this view, based on an atrophy in which this lesion was found by Dr. Gower, to account for this class of cases, which Von Graefe first called attention to. In most of Hutchinson's cases (which were seventeen in number), however, the iris and ciliary muscles were also affected. Other portions of the nervous system, in addition, were implicated in all his cases, so that none of them were exactly parallel to the two now presented, which were apparently unique. Dr. Roosa had exhibited them at the New York Ophthalmological Society, and none of those present had ever met with similar cases, with the exception of Dr. Kipp, of Newark, N. J., who stated that he had seen one case which he thought was identical. This case, however, had never been published. In conclusion, Dr. Birdsall referred to some other allied cases reported by different authors, and spoke of certain relations between tabes dorsalis and progressive muscular atrophy, as well as of syphilitic ocular affections.

DR. SPITZKA thought that Dr. Birdsall's explanation of these cases was probably the correct one. Such troubles were analogous to bulbar paralysis; but there was one difficulty about accounting for them which did not exist in the case of the latter, and that was the great distance between the nuclei of the fourth and the sixth pairs of nerves.

DR. BIRDSALL said that he looked upon the parts mentioned in his paper as associated functionally, and that was the view adopted by Hutchinson. This paralysis, he thought, was a systemic affection, and the reason that he felt obliged to adopt the theory of degeneration was, the greater difficulty of accounting for the trouble by a gross lesion, on account of this very distance between the nuclei of the different nerves involved.

LOCOMOTOR ATAXIA AND SYPHILIS.

DR. E. C. SEGUIN had expected to contribute a paper entitled "A Study of the Etiology of Tabes Dorsalis

with Special Reference to the Efficiency of Syphilis," but was prevented from doing so, as well as from being present at the meeting, by illness. He therefore merely sent some statistics of his cases, which were now read by Dr. Birdsall. There were 72 cases in all; and of these, 22, or 30 per cent., had had chancre, and 16, or 22.2 per cent., chancre followed by secondary symptoms. In 14 cases, or 19.8 per cent., there had been neither chancre nor secondary symptoms, and in 20, or 28 per cent., there was no mention of syphilis. Dr. Birdsall said that in 43 cases seen by him, 9.5 per cent. had had syphilis. His patients had been mostly hospital cases, while Dr. Seguin's had been mostly in private practice.

DR. SPITZKA said that before 1881 he had seen 61 cases of locomotor ataxia, and since 1881, 23 cases. Of the latter series, in which greater care had been taken to secure accurate histories, over 80 per cent. of the patients had had syphilis. But, what he thought was of more value than any figures, he was able to report one case of complete cure by vigorous antisyphilitic treatment. It was a typical case of ataxia (which had at one time been so great that the patient was confined to bed), with the Argyll-Robertson pupil and other pathognomonic signs of the disease; and now it was perfectly cured, with the exception that there was a slight asymmetry in the patellar tendon reflex (which had been completely lost), this being a little fuller than normal on one side, and a little less than normal on the other.

DR. ROCKWELL had seen forty-four cases, all in private practice, and seventeen of these were syphilitic. Of the forty-four, six were women, and two of these were syphilitic. He had no doubt that a much larger proportion of his cases than seventeen had really had syphilis, if the truth were known, and it was his firm conviction that syphilis existed in a majority of all the cases of ataxia, and was by far the most important factor in the etiology of the disease.

DR. PUTNAM had seen 34 cases, and of these about fifty per cent. were syphilitic. In none of the latter, however, had anti-syphilitic treatment been successful.

DR. LEONARD WEBER, of New York, repeated the statistics which he had given in his paper read recently before the Academy of Medicine. These, he said, would seem to indicate that syphilis played quite an important *rôle* in the etiology of ataxia; but by no means so important as claimed by Erb, Fournier, and others. He was not so sanguine in regard to antisyphilitic treatment as some others. In his experience, when there was a rapid development of tabes in the course of syphilis (the ataxia being due to multiple lesions, probably in the lepto-meninges, and not to true sclerosis of the cord), there was a fair prospect of securing relief; but in the more slowly developing cases of tabes, in which the patient had had syphilis twenty years before, he had yet to see the first case in which any improvement took place. The great expectations of success which had been raised by the announcement of the syphilitic origin of ataxia by Erb and Fournier, he thought, had been by no means realized.

DR. C. L. DANA, of New York, read a paper entitled

FOLIE DU DOUTE AND MYSOPHOBIA.

He referred to the history of *folie du doute*, or the "doubting madness," which had been chiefly studied by the French writers. Griesinger and Berger had also described a psychopathic symptom which belonged to the same category and had called it *Grübelsucht*, or metaphysical mania. In *folie du doute* the patient was harassed with a constant desire to question, speculate, and repine over details. His mind was never settled, but was in a condition of "pruritus." It was a psychopathic symptom, which indicated that the patient was a monomaniac and truly insane, or only hypochondriacal, or profoundly neurasthenic and hysterical. It was the form in which *primäre Verrücktheit* sometimes developed. Mysophobia, or fear of contamination, was a symptom indicating probably a similar condition. *Folie du doute* had been divided by Ball into several varieties, such as the suspicious, the calculating, the timid, and finally *tactile*, and mysophobia had been classed as the tactile form of *folie du doute*. This classification was open to criticism, but Dr. Dana was inclined to think it was correct.

He then related two cases, one a typical one of *folie du doute*, as described by Falret, Ball, and others, and the other one of mysophobia, as first described by Hammond. The first patient was a married man of thirty, of a phthisical, but not neurotic, family history, who had indulged in much sexual excess. He was tormented and worried continually as to the ordinary details of his daily life. He had to wash, shave, eat, drink, exercise, work, etc., in a particular way or else he was wretched. The trouble was of ten years standing. Medicinal treatment was tried, but did not have the slightest effect; under a system of moral training and education considerable improvement had been secured, and in his efforts in this direction Dr. Dana had been ably seconded by the man's wife, who was a sensible and intelligent woman. Notwithstanding his infirmity, the patient had always been able to discharge with ability his business duties, which were those of a bookkeeper.

The second patient was a single woman of twenty-eight, of healthy family history, but of hysterical temperament, who for six months had suffered from fear of dirt and contamination, exhibiting the typical symptoms described in cases reported by Hammond, Shaw, Seguin, and Russell. She had never had convulsions or chorea, and was free from uterine disease. Dr. Dana had seen her only once, in consultation, and she did not seem to be very anæmic. She presented the appearance of a hysterical woman, and he also noticed that she seemed to have been the subject of facial paralysis. When she protruded the tongue it deviated decidedly to one side. Under the use of ferruginous and other tonics, as well as of moderate doses of the bromides, she had already improved to some extent, and he had advised that moral influences should be brought to bear upon her a little more forcibly than had hitherto been the case.

In conclusion, Dr. Dana suggested as points for discussion the relation of mysophobia to *folie du doute* and *Grübelsucht*, and the question of the proper interpretation of morbid fears in general.

DR. SPITZKA said that the class of patients described by Dr. Dana, although of perfectly sound mind in all other respects, were suffering from *bona fide* insanity. In male patients, the one great cause was masturbation. The treatment should be both medicinal and by moral

means, and was best conducted in a small country home, where eight or ten patients were received. He suggested *imperative conception* as a much better term than morbid fears.

DR. G. BETTON MASSEY, of Philadelphia, read the report of

A CASE OF SUDDEN LOSS OF VISION FOLLOWING ANÆSTHESIA OF THE FIFTH NERVE, WITH REMARKS ON THE MODIFYING EFFECT OF ANÆSTHESIA ON THE GALVANO-REACTIONS OF THE SPECIAL SENSES.

The patient was a farmer, forty-eight years of age, who three years before coming under observation noticed numbness of the left side of the face. This increased steadily for about two years, and was accompanied by heaviness and pain in the head, felt mostly on the left side. At the end of that time vision became impaired in the left eye, and in ten days was totally lost. Ophthalmoscopic examination by Dr. William Thomson at this time showed white atrophy, the disk being snow-white. He was then placed under the care of Dr. S. Weir Mitchell, who gave him increasing doses of iodide of potassium, and later the bichloride of mercury in small doses. One year afterwards, on the 8th of February, 1884, he found the right eye failing, and in one week it was entirely blind. Examination showed no light-perception in either eye. Both pupils were very small, and both upper eyelids were kept up by forced effort. The ophthalmoscope showed no decided change except, perhaps, overfulness of the retinal vessels. No cause could be assigned for the attack.

The patient was now referred to Dr. Massey for treatment. Over the left eye there was a partially anæsthetic spot, about four centimetres long, by three wide, oval in outline, and extending laterally. Electrical excitation of this area by placing both poles within its limits, developed the following facts: Faradic current, sensation lessened; galvanic current, local effect on blood-vessels of skin normal. The local galvanic sensations, however, presented a decided deviation from the normal—the sensation of burning being normal, but the sensation of tingling about two-thirds lessened. Having mentioned his observations in regard to gustation, vertigo, and vision in the case, Dr. Massey stated that, at the present time, the patient had been for two months under a treatment consisting of galvanic interruptions to the eyes and numb spot, and increasing doses of sulphate of strychnia, and that as an apparent result there had been a decided increase of sensation in the left brow, and occasional flashes of light in the eyes.

Fearing that the remarkable lessening of normal vertigo and taste originally found in this case might be due to an increased resistance at the anæsthetic spot, he carefully estimated the amount of current actually passing through the circuit by the deflection of a galvanometer needle, and found that this deflection was exactly the same for each side. The amount of electricity passing, therefore, could not have been different, and the difference in the results on the two sides could only be explained by placing these phenomena in the already large list of reflex actions—the integrity of one side of the arc in this case being impaired, with a corresponding impairment of the phenomena. This solution of the "electric taste" and the "electric flash" had been suggested some years ago by Althaus, in his work on "Electro-therapeutics." Besides a corroboration of the facts observed by him, the importance of the present case, Dr. Massey thought, consisted in the clear relation established between the restoration of sensation and the return of the phenomena.

DR. GEORGE W. JACOBY, of New York, had prepared a paper on

CEREBRO-SPINAL SATURNISM,

but owing to the lateness of the hour, he did not read it. Instead of this, he reported briefly one of the cases described in it, which was one of locomotor ataxia, which he believed to be due to lead-poisoning, and which recovered under the use of iodide of potassium, with the exception that the tendon reflex was not restored. The literature on this subject, he said, was extremely meagre, and he had been able to find only three other cases mentioned.

DR. AMIDON could not see why lead-poisoning should not be a cause of ataxia as well as arsenical and mercurial poisoning and diphtheria.

DR. BIRDSALL said that he had often noticed in patients suffering from lead-poisoning a tremor which amounted almost to ataxia, but he had never seen one with real ataxia of the lower extremities.

DR. DANA thought that, as lead-poisoning was so very common, ataxia would be oftener noticed in connection with it if it were one of the causes of that disease, and that it would require a considerable amount of evidence to prove that Dr. Jacobi's case was really due to this cause.

The Association then adjourned.

RHODE ISLAND MEDICAL SOCIETY.

Annual Meeting, held at Providence, June 19, 1884.

(Specially reported for THE MEDICAL NEWS.)

THE Society met in Lyceum Hall, Providence, THE PRESIDENT, DR. JOB KENYON, in the Chair.

DR. GEO. D. HERSEY read

THE SECRETARY'S ANNUAL REPORT,

which stated that the Society had held four meetings during the past year; that four deaths had occurred among the Fellows, two had removed from the State. The present active membership is 187, nine new Fellows having been received during the year.

DR. C. W. PARSONS read the report of the trustees of

THE FISKE PRIZE FUND.

The sum of $300 has recently been awarded to Dr. Chas. V. Chapin, of Providence, for the best essay on "The Origin and Progress of the Malarial Fever now Prevalent in New England." No award was made on the other proposed subject.

For the year 1885 the following subjects are submitted, for the best essay on either of which, a prize of two hundred ($200) dollars is offered:

(1) "Original Investigations in Household Hygiene."

(2) "The Present State of the Germ Theory of Disease."

(3) "Physiological and Pathological Effects of the Use of Tobacco."

(4) "Migraine, its Nature and Treatment."

THE REPORT OF THE BOARD OF CENSORS

was presented by Dr. J. W. C. Ely. The following gentlemen were recommended for Fellowship and subsequently elected: Drs. Henry S. Swan, William A. Tremaine, Byron J. Lillibridge, Sanford S. Burton, Benjamin R. Symonds and Abraham L. Falcon. The Board also recommended Dr. Lloyd Morton, of Pawtucket, for Anniversary Chairman for 1885.

THE REPORT OF THE TREASURER,

DR. C. H. LEONARD, showed a balance of cash on hand of $218.88. Upon motion of Dr. Hersey, it was voted to transfer $200 of this balance to the printing fund, which would then amount to $1733.43.

DR. T. NEWELL reported for

THE LIBRARY COMMITTEE

that there were 3586 volumes in the library; showing an increase of 1083 volumes for the year. The invested building fund now amounts to $542.90. Dr. H. G. Miller, of the same committee, said that the Society had been remarkably favored in securing at a reasonable price seven hundred volumes from the private library of the late Dr. David King, of Newport, the purchase having been made at the auction sale in New York. Many of these volumes were exceedingly choice and valuable.

DEATH OF DRS. PERRY AND BULLOCK.

Dr. W. E. Anthony, of a committee embracing also Drs. J. H. Eldredge and A. Ballou, presented the following preamble and resolutions, which were adopted.

Whereas, In the decease of Drs. Otis Bullock and Thomas W. Perry this Society has lost two members who had long been connected with it;

Resolved. That we desire to place on record our appreciation of those traits of character by which they had attained such a position of usefulness and honor in the Society and in the community, Dr. Bullock was for one year President of the Society, and for forty years was a member of the Board of Censors, and, as such, conscientiously fulfilled all the duties pertaining to the office with unfailing kindness and courtesy. Dr. Perry was a frequent attendant on our meetings, and often contributed the result of his large experience to the discussions.

DR. LLOYD MORTON, Chairman of the Committee on

THE LEGISLATIVE BILL FOR THE APPOINTMENT, ETC., OF MEDICAL EXAMINERS,

reported that the bill, in a considerably modified form, had already become a law, and would go into effect July 1st, proximo. It was then voted to accept this report, and to discharge the Committee, with the thanks of the Society for their efficient services.

OFFICERS FOR THE NEXT YEAR

were then elected as follows:

President.—Oliver C. Wiggin, M.D., of Providence.

Vice-Presidents.—H. G. Miller, M.D., of Providence; John W. Sawyer, M.D., of Providence.

Recording Secretary.—George D. Hersey, M.D., of Providence.

Corresponding Secretary.—E. M. Harris, M.D., of Providence.

Treasurer.—Chas. H. Leonard, M.D., of Providence.

Board of Censors.—Drs. Ariel Ballou, James H. Eldredge, J. W. C. Ely, George P. Baker, S. S. Keene, Benjamin Greene; Edward T. Caswell, and Eugene Kingman.

It was voted to hold the *September meeting* of the Society in Providence.

THE ACTION OF QUININE.

DR. GARVIN, of Lonsdale, said that in view of the very mistaken and, in many instances, harmful, impression that exists in the minds of many people regarding the effects of quinine on the system, he wished to offer the following:

"*Resolved*, that the use of quinine in the treatment of intermittent fever, leads to no injurious after-effects."

In the course of a brief discussion on the resolution, Dr. A. Ballou said it seemed to him to be hardly becoming the dignity of the Society to take such action. In this sentiment the Society evidently concurred, as the resolution was not adopted.

The *Annual Address* was then delivered by Prof. Geo. I. Chace, of Providence, after which the Chair called upon the President-elect, Dr. Wiggin, who made a brief but graceful speech of appreciation of the honor conferred on him.

The Society then adjourned to the Narragansett Hotel to dine, Dr. J. W. C. Ely acting as Anniversary Chairman.

KENTUCKY STATE MEDICAL SOCIETY.

Thirty-ninth Annual Meeting, held at Bowling Green, June 3, 4, and 5, 1884.

(Specially reported for THE MEDICAL NEWS.)

(Concluded from page 713.)

WEDNESDAY, JUNE 4TH—SECOND DAY.

AFTERNOON SESSION.

DR. PINKNEY THOMPSON, of Henderson, read a paper on

TYPHOID FEVER,

which, he said, is a disease that has a distinct clinical history and runs a distinct course, and in his judgment is never aborted by remedies. The paper elicited considerable discussion in reference to treatment.

DR. A. W. JOHNSTONE, of Danville, read a paper on *Litholapaxy*.

DR. DUDLEY S. REYNOLDS then spoke on *Inflammations of the Iris*.

THURSDAY, JUNE 5TH—THIRD DAY.

DR. S. D. FINCK, of Louisville, read a paper on *Phlyctenular Conjunctivitis*.

DR. W. M. FUQUA, of Hopkinsville, read an elaborate paper on *Civilization and Sanitation*.

DR. WM. CHEATHAM, of Louisville, read a paper upon

SYMPATHETIC OPHTHALMIA,

in which he presented the following conclusions: Enucleation is better performed in the stage of irritation; if it cannot be performed then, operate in the stage of inflammation, for while there is life in the eye there is hope. It should not be performed in iritis serosa. It can be performed at the onset of irido-cyclitis, although

the eye causing the sympathetic inflammation may not be blind.

The following resolution was adopted on the

DEATH OF DR. SAMUEL D. GROSS.

Whereas, the late Dr. Samuel D. Gross, of Philadelphia, was one of the earliest Presidents of this Society, and always on its rolls, it is fit that we should formally add our meed of respect to his memory.

What we shall say of him is much to us, though it is but a small part of the large sum of testimony to his worth going up from medical men in both hemispheres. In recognizing his high merits we shall join company with the most dignified and venerable institutions of learning known to the English-speaking race; institutions that have done themselves honor in bestowing honors upon him. It is some comfort to us who mourn him, that in the corporate existence of this organization, of which he was a founder, *he still lives*. To our remotest year his name shall stand as that of one upon whose full and excellent life every member may well wish his own were modelled.

Resolved, That as he was a great surgeon and leader of thought we shall continue to hold his precepts in high esteem. As he was a kind and loyal friend we shall cherish our memories of his personal dealings with us; as he lived frankly, purely, and courteously, we shall reverence in him the gentleman above reproach.

DR. S. H. STUCKY, of Louisville, read a paper on *Catarrhal Headache and Its Allied Affections*.

DR. J. M. MATHEWS, of Louisville, read a paper on

OPERATIONS UPON HEMORRHOIDS DURING THE INFLAMED STATE.

He held that a pile is a tumor, and he took issue with those authorities who characterized this tumor as a vascular tumor. He maintained that it is a tumor which is well supplied with blood; the vessel which feeds it can be felt at the top pulsating with a beat almost equal to that of the radial artery. He defined three varieties of these tumors: First, the capillary, in which the small vessels push into the folds of the mucous membrane, without any infiltration at all. That is one kind; and it is a dangerous kind from the fact that the circulation is free and rapid. Being fed by an artery of considerable size, if ulceration takes place over it and perforate it, there is danger that the patient will bleed to death. If the chain of morbid phenomena be not here checked, and the inflammation is allowed to continue, it goes on to the formation of the second variety, the venous pile. Admitting the existence of piles, he asked, can the necessity of an operation be disputed? And he took issue with any one who claims to cure this kind of pile or tumor by anything else than an operation. From a variety of causes piles are liable to become inflamed, and, once inflamed, they may easily become strangulated by passage below the sphincter; everything is aggravated then, and it may take some weeks to quiet this trouble. It has occurred to him, why not operate upon them, and get rid of them at once. There is no authority that says, operate upon a pile during the inflamed state; but they will tell you to apply treatment to reduce the inflammation.

He then cited the following cases. A few weeks ago he was called in consultation to a distinguished lawyer, who was in this condition. The family physician in attendance had tried in vain to quiet inflammatory action for two or three weeks. He found hanging down from the anus two solid tumors; he passed the knife around them, and ligated them. He visited him the following morning, expecting to find him in some trouble. To his surprise and satisfaction, he was out of bed, and, in a week, out of the house.

Another case, a young man, had a mass of inflamed tissue hanging from him as large as his fist, which it would have taken weeks to abate. He ligated the whole mass. He went to see him the next morning, and was told that he had risen early and gone out. Three days later, he received a postal from Cairo, Ill., saying that his patient was that far on his way home, and was all right. When he got home, he wrote that he was entirely well. Since then, Dr. Mathews has had five or six cases of similar character, in which the proceedings and results were similar. He therefore concludes that, instead of applying remedies to relieve the inflammatory trouble, the tumors should be operated upon at once. The Society then adjourned.

NEWS ITEMS.

LONDON.

(*From our Special Correspondent.*)

THE OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM met on June 5, and transacted some important scientific business.

PREVENTION OF BLINDNESS FROM OPHTHALMIA NEONATORUM.—DR. BRAILEY read the report of the Committee on this subject. In answer to a very large number of inquiries issued to private persons, ophthalmic and lying-in hospitals and institutions for the blind, twenty-three statistical replies, all of them from institutions for the blind, were received. Four of these, those of the Belfast Deaf, Dumb, and Blind Institution, the London Society for Teaching the Blind to Read, the Blind School at York, and the Blind Institution at Hull, were tolerably explicit, and the answers appeared from other evidence to be trustworthy. In the Belfast Institution, thirty per cent. of the persons concerned, owed their blindness to ophthalmia neonatorum. In the London Society, twenty per cent. were certainly blind from this disease; but from the extremely frequent occurrence of "congenital cataract" and "cause unknown" in cases of blindness from birth, the Committee were of opinion that at least another ten per cent. should be added, thus making again thirty per cent. In the Yorkshire School, forty-one per cent. were blind from this cause; and in the School at Hull, five cases out of fourteen (thirty-five per cent.), personally examined by Dr. Rockliffe, were with certainty attributed to the same disease. The statistics of the other institutions were inexplicit, but pointed to about the same results. The numbers agreed substantially with those of foreign investigators, notably those of Reinhard, who, on investigation of twenty-two German blind asylums, found six hundred and fifty-eight blind from this disease among a total of twenty-one hundred and sixty-five (thirty and a half per cent.).

The Committee recommended the adoption by the

Ophthalmological Society of the following resolutions (modified from those originally suggested by Dr. David McKeown, of Manchester):

1. That the purulent ophthalmia of newborn infants being the cause of a vast amount of blindness, mainly because of the ignorance of the public regarding its dangerous character and the consequent neglect to apply for timely medical aid, it is desirable to instruct those in charge of newborn children by a card, in substance as follows: "Instructions regarding newborn infants. If the child's eyelids become red and swollen, or begin to run with matter, within a few days after birth, it is to be taken without a day's delay to a doctor. The disease is very dangerous, and if not at once treated, may destroy the sight of both eyes." This is to be distributed through the medium of the Poor Law and Birth Registration Organization of the United Kingdom.

2. That the advocacy and aid of the medical press be solicited in drawing general attention and especially that of the authors of text-books of midwifery, of the lecturers on the same subject for students and midwifes, and of the various institutions which train, and charitable institutions which employ, midwives, to this important subject.

3. That a copy of the first resolution be forwarded to the respective Presidents of the Governing Boards of the United Kingdom.

The scientific affairs of the evening next occupied attention. It may be mentioned that Herren Becker, of Heidelberg, and Snellen, of Utrecht, were present.

MONOCULAR DIPLOPIA.—DR. BRAILEY communicated a case of this disease in a man aged fifty-six. He had paralysis of the right external rectus with dilatation of the pupil. The diplopia only existed in the outer half of the field of vision. The optic disks had subsequently atrophied. Red and green colors could not be perceived. The right knee-jerk was almost absent. The patient had had syphilis.

TUBERCLE OF THE CHOROID.—DR. MULES showed drawings and read a paper on this subject. The patient was a girl, aged ten, who died of acute miliary tuberculosis fourteen days after the apparent commencement of her illness. There was double optic neuritis, and surrounding the disk in each eye were eight or ten circular nodules, yellowish-white at the centre and passing gradually at the periphery into the color of the natural choroid.

SEROUS CYST OF THE IRIS.—DR. ADAMS FROST exhibited a case in a man aged twenty-eight. Twenty-four years before, the eye had been injured by a fork, and the development of the cyst dated from that time. Ten years ago an iridectomy had been performed. The cyst occupied the upper and inner quadrant of the anterior chamber. It would be difficult to remove the cyst, as it was in contact with the cornea and lens.

SARCOMA OF THE CHOROID.—MESSRS. COWELL AND JULER exhibited a glycerine jelly preparation and microscopic sections of a case of sarcoma of the choroid.

DISSEMINATED CHOROIDITIS.—MESSRS. CRITCHETT AND JULER exhibited a living case of disseminated choroiditis in a woman aged forty-six. There was a distinct history of syphilis acquired five years before. The case was chiefly interesting on account of the great number of large and small yellowish-white patches distributed over the fundus, including the yellow spot region of the right eye. Very little pigment was to be seen, and the visual acuteness and visual field of the right eye were normal. The left eye had become totally blind three years ago; presumably from the same cause.

MR. JONATHAN HUTCHINSON related a case in which the appearances were precisely similar, and which occurred in a young lady, aged fifteen, who was the subject of congenital syphilis, but there were no other manifestations of this diathesis at the time.

ACUTE OPTIC NEURITIS ASSOCIATED WITH ACUTE MYELITIS.—DR. SHARKEY read a very interesting paper on a case of this disease. The patient, a girl, aged seventeen, lost her sight in four days, November 9 to 13, 1883. There were no other symptoms of any sort. Severe double optic neuritis was found, and thirty-three days after her vision failed she began to complain of paralysis with loss of sensation, first in the left leg and then in the right. Anæsthesia gradually spread up the trunk and involved the arms, and she had incontinence of the evacuations. Cystitis came on, she passed offensive purulent urine, and the temperature reached 105° F. Finally, she died of peritonitis, sixty-two days after the blindness had begun and twenty-nine after the appearance of paralysis. At the necropsy, peritonitis, cystitis, and suppurative nephritis were found. To the naked eye the brain and its membranes were healthy. But there was softening of the cervical region of the spinal cord over a space of two or three inches in length. Microscopic examination revealed the presence of acute inflammation with softened cervical region in the columns of Goll above it, and in the lumbar enlargement, as well as in the optic nerves, disks, chiasma, and tracts, there was slight inflammation of the meninges about the chiasma and on the under surface of the frontal lobes. The etiology was quite obscure. Clifford Allbutt, Seguin, Noyes, Steffen, and Erb, had noticed the association of acute myelitis and optic neuritis, and more recently Dreschfeld and Chisolm. Gowers and Dreschfeld, thought they were associated phenomena due to a common cause. Clinically, such cases are of great importance, as they simulate coarse disease of the brain.

AMAUROSIS IN INFANCY.—MR. NETTLESHIP read a paper on amaurosis in infancy. He dwelt on the question of prognosis, and pointed out that there was a fairly well-defined group of cases in which the amaurosis was not recovered from; sight was absent or defective from birth, several children of the same parents were often affected and the parents were often akin. Some of the patients were idiotic, others stupid or weak, others quite intelligent; the optic disks were either healthy or atrophied; in the milder cases, in which sight was partly retained, there was often total color-blindness; in cases of absolute blindness, the pupils still reacted to light, which appeared to show that the centre for pupillary action in or near the corpora quadrigemina remained intact, although higher centres were absent or atrophied. In cases of amaurosis in which recovery was probable, the history was of great assistance; it was generally stated that the child could see well for some months or even years after birth, and then it lost its sight during an illness with cerebral symptoms often diagnosticated as meningitis; the optic disks in the great majority of cases were either

healthy or showed merely some slight doubtful pallor; frequently the power of walking, standing, or even sitting, was lost during the same illness. The blindness appeared to last from one to six months, and recovery took place slowly. He thought that in all these cases intracranial inflammation certainly took place, and perhaps spinal mischief as well. Possibly, in some cases, the blindness might be produced by pressure of fluid accumulated in the ventricles, but the explanation would not serve for all cases.

SANITARY PRECAUTIONS.—The Governor of Florida has forwarded to the Surgeon-General, U. S. Marine-Hospital Service, with his approval, a series of resolutions from the Board of Health of Tampa, Florida, requesting the establishment of a government quarantine station at the mouth of Tampa Bay, with a medical officer in charge, and enforcement of such quarantine regulations as the necessities of the case may require. The Board states that, in making the request, it is "influenced rather by considerations for the public safety than apprehension for the security of the town of Tampa, as the Board of Health reserve the right to, and can and will establish such quarantine by land as well as by water as may be necessary to protect the public health of the town from epidemic diseases should the necessity for so doing arise; but of course feel that an efficient quarantine at the mouth of the Bay would tend greatly to allay apprehension in this city as well as in the various towns and cities on the St. John's River."

A dispatch was sent to the Governor of Florida, informing him that an inspector would be stationed at such point as he might direct to tide over any emergency during the summer, but that regular quarantine buildings could not be built out of the present appropriation.

A telegram signed by the Governor of California, Mayor of San Francisco, and the State Harbor Commissioners, was received at the Treasury Department, stating that "there are no quarantine facilities at the port of San Francisco, the same are urgently needed, and the U. S. Government is earnestly requested to aid in providing the same." Answer was sent that the quarantine fund under control of the Department was not sufficient to establish quarantine buildings and necessary appliances, but that an inspector with boatmen and tents can be placed at such point as the Harbor Commissioners unite upon, to tide over the emergency.

DIPHTHERIA IN CAPE BRETON. — Information has been received, through the Secretary of State, from the U. S. Consul at Pictou, Nova Scotia, stating that diphtheria is so prevalent at several ports in Cape Breton that he has instructed his consular agents to advise masters of vessels bound to the United States to take out bills of health.

YELLOW FEVER IN MEXICO.—The deputy collector at Tucson, Arizona, under date of June 13th, says that yellow fever has reappeared at Guaymas, Mexico, where it prevailed so extensively last year. He adds that the sanitary laws are so lax in Mexico as to render it impossible to obtain authentic information, that burial permits are granted without a medical certificate, and no reliable data can therefore be obtained, but that the United States Consul at Guaymas is his authority for the reported prevalence of the disease and that there is little room to doubt the Consul's statement both as to its existence and fatal character, although the Mexican authorities are issuing "clean bills of health" to outgoing vessels, a course they pursued last year even after the pestilence assumed epidemic proportions.

THE CHOLERA.—Surgeon-Major McLeod, the health officer of Calcutta, under date of April 30, speaking of the excess of deaths for the month (1460, against 972 for the previous month), says: "This monthly total exceeds all the corresponding figures of the past decade, excepting 1878, and also exceeds the decennial mean by 318. . . . . There were 486 deaths from cholera, against 123 the preceding month. The number is very high, and exceeds all the corresponding figures of the past decade. It also surpasses the decennial mean by 275."

Consular reports from Calcutta give the following figures:

Week ending April 26,	174	deaths	from	cholera.	
" " May 3,	106	"	"	"	
" " " 10,	91	"	"	"	

Authentic information has been requested by the State Department from the U. S. Consul at Toulon, relative to the reported outbreak of Asiatic cholera in that city.

THE FIFTH INTERNATIONAL CONGRESS OF HYGIENE will be opened at the Hague on the 21st of August, and will continue in session one week. Applications for membership may be at once made to the General Secretary, Dr. Van Overbeck de Meijer, Professor of Hygiene at the University, Utrecht, Holland. Among the papers announced to be read are one on the "Attenuation of Virus," by M. Pasteur; on "Infectious Diseases," by Dr. Koch; and on the "Practical Application of the Doctrine of Infectious Poisons" by Dr. Von Kelnburg, of Bonn.

HOW TO PREPARE A 1 TO 1000 SOLUTION OF CORROSIVE SUBLIMATE.—SIR JOSEPH LISTER writes to the *British Medical Journal* (May 24, 1884), that one drachm by weight of a solution of one part of corrosive sublimate in one and a half part of glycerine contains two-fifths its weight, or twenty-four grains of the sublimate. This, multiplied by 1000 (the proportion of water required), gives 24,000 grains, which is very nearly three pints. It is, however, much more convenient to use fluid measure than weight, and a fluiddrachm of the glycerine solution referred to requires four pints of water to produce the 1 to 1000 solution.

M. PASTEUR.—It is stated that it is proposed to offer M. Pasteur a seat as life senator in the place of Mr. Wurtz, recently deceased. We also learn that the Minister of Public Instruction has obtained for M. Pasteur ground in the Bois de Boulogne, in which to prosecute his experiments with the virus of rabies.

SIR HENRY WENTWORTH ACLAND, K.C.B. — The many friends, on this side of the Atlantic, of Dr. H. W. Acland, Regius Professor of Physics at Oxford, will

be gratified to learn that the Queen has been pleased to confer upon him the dignity of Knight Commander of the Bath.

THE ANTIVIVISECTION AGITATION FROM A LAYMAN'S POINT OF VIEW.—George Augustus Sala, in his "Notes of the Week" in a late number of *The Illustrated London News*, writes:

"The Committee of the Antivivisection Society have sent me a circular referring to a meeting of the members and supporters of the Society to be held on Friday, May 9th.

"I have nothing to say, myself, against vivisection (when placed under proper legal restrictions), for the simple reason that for fifty years I have been in constant contact with the doctors, and have known some of the most eminent surgeons of the last and the present generations.

"I was, in early childhood, that which I once heard my mother's maid, in conversation with a friend, describe me as being 'a miserable little Hobject;' and the doctors were continually doing things to me. I am, in many respects, a miserable object now, and require to be periodically patched up by the faculty. And I will say naught against vivisection, because I never yet met with a cruel doctor; and because I firmly believe medical men to be among the most humane, the most generous, the most unselfish of mankind; and I indignantly denounce the imputation that there are any members of a noble, a high-minded, and a beneficent profession who, actuated by no more exalted motives than their 'greed after the hidden things of the life of the flesh,' confessedly and without compunction torture dumb animals. The medical man practises vivisection (with the smallest possible infliction of pain on the animal vivisected), not because he is selfishly greedy after 'the hidden things of the life of the flesh,' but because he wants to find out what is the matter with *you*, verbose Sir or sentimental Madam; because he is striving his utmost to devise means for saving *you* from misery and anguish; for mitigating the agony of the ills that rack the joints, or fire the veins, or that 'in the deeper vitals rage.' He is no worshipper of knowledge as of an idol. He tries during his whole laborious life to learn more and more, in order that he may console and relieve and preserve suffering humanity."

NEW MEDICAL JOURNAL.—The Italian journals announce the first number of *Commentario Clinico delle Malattie degli Organi Genito-Urinari*, published in Pisa by PROF. BARDUZZI. It is a bimonthly journal of forty pages.

THE ILLINOIS MEDICAL REGISTER.—The Illinois State Board of Health is now engaged in revising the Register of Physicians, preparatory to publication. Any changes or corrections should be promptly sent to the Secretary. Lists of the Officers of the Medical Societies in the State are also requested.

RESIGNATION OF PROFESSOR GOSSELIN.—Professor Gosselin, the acknowledged head of French surgery since the death of Nélaton, has, by reason of advancing years and impaired health, found it necessary to resign his Chair in the Faculté.

M. PASTEUR has been furnished with an opportunity of testing his theories concerning rabies upon the human subject. One of the servants of the Paris and Lyons Railway at Tarascon-sur-Rhone, having been bitten by an undoubtedly mad dog, has just placed himself in the hands of the illustrious savant.—*Brit. Med. Journ.*, June 14, 1884.

THE S. D. GROSS PROFESSORSHIP OF PATHOLOGICAL ANATOMY.—The Committee acknowledge the receipt of the following subscriptions:

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OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 17 TO JUNE 23, 1884.

MAGRUDER, D. L., *Lieutenant-Colonel and Surgeon.*—Granted leave of absence for one month.—*Par. 7. S. O. 143, A. G. O.*, June 20, 1884.

HAPPERSETT, J. C. G., *Major and Surgeon.*—Granted leave of absence for four months.—*Par. 5, S. O. 141, A. G. O.*, June 18, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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